

CONTRA
COSTA
COUNTY



FINAL ENVIRONMENTAL IMPACT REPORT
VOLUME 2: RESPONSES TO COMMENTS ON DRAFT EIR
FINAL EIR ERRATA

COWELL RANCH PROJECT GENERAL PLAN
AMENDMENT AND RELATED ACTIONS

COUNTY FILE #1-92-CO

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FINAL ENVIRONMENTAL IMPACT REPORT FOR THE PROPOSED COWELL RANCH PROJECT

VOLUME 2

RESPONSES TO COMMENTS ON THE DRAFT EIR
FINAL EIR ERRATA

COUNTY FILE # 1-92-CO
STATE CLEARINGHOUSE #93013024

February 1998



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I. INTRODUCTION

The Final Environmental Impact Report (FEIR) for the proposed Cowell Ranch Project General Plan Amendment and Related Actions consists of three volumes:

- (1) the Draft Environmental Impact Report (Draft EIR), which was distributed for public review and comment on October 18, 1996; and
- (2) a two-volume Response-to-Comments document of which this document represents **Volume 2**, which includes responses to all comments received during the public review period on the Draft EIR, plus a set of errata incorporating all revisions made to the Draft EIR in response to these comments.

Certification of the Final EIR by the Contra Costa Board of Supervisors must occur prior to any action by the county on the proposed project.

INTRODUCTION

The following information is provided for the purpose of providing background information on the project and the surrounding area.

1. The project is located in the City of Los Angeles, California.

2. The project is a proposed development of a new building.

3. The project is located in the City of Los Angeles, California.

III. RESPONSES TO COMMENTS ON THE DRAFT EIR

After completion of the Draft EIR, the County of Contra Costa (i.e., the Lead Agency) is required under CEQA guidelines to consult with and obtain comments from other public agencies having jurisdiction by law with respect to the project, and to provide the general public with opportunities to comment on the Draft EIR. The County is also required to respond in writing to substantive environmental points raised in this Draft EIR review and consultation process.

The Draft EIR was distributed for public review and comment on October 18, 1996. The required 45-day public review period on the Draft EIR ended December 2, 1996. The County extended the public review period to March 19, 1997, to allow more time for interested agencies and individuals to prepare written comments.

Comments on the Draft EIR were received in the form of public testimony at Zoning Administrator hearings on the Draft EIR held on November 18, 1996 and December 11, 1996, and letters and memoranda submitted to the County during the public review period. Seventeen people from the community commented at the Zoning Administrator hearings. Eighty-three letters and memoranda were received.

This Response to Comments chapter includes the following subsections:

- A **list of commenters** (section III.A), which lists all public agencies, individuals, and organizations who commented during the Draft EIR public review period;
- A set of **master responses** (section III.B) which provide consistent responses to numerous similar comments on the Draft EIR which address the same issues repeatedly (these master responses are referenced throughout the response-to-comments section where these common issues are raised);
- A **responses to public hearing comments** section (section III.C), which includes the responses of the Lead Agency to comments made at the Contra Costa County Zoning Administrator hearings held on November 18, 1996 and December 11, 1996; and
- A **responses to written comments** section (section III.D), which includes the response of the Lead Agency to all 83 letters and memos received during the Draft EIR public review period.

A. LIST OF COMMENTERS

The public agencies, organizations, and individuals who commented on the Draft EIR during the public review period (October 18, 1996 to March 9, 1997) are listed below:

1. Applicant

Patricia E. Curtin, Attorney; Gagen, McCoy, McMahon & Armstrong, representing the Cowell Foundation (84)

2. Contra Costa County

Planning Commissioner Sherri Anderson, East County Regional Planning Commission (2.03)
Henry Finch, Project Engineer, Flood Control, Contra Costa County Public Works Department (5)

3. Other Public Agencies

Mitch Oshinsky, Community Development Director, City of Brentwood (1.05, 78)
Brad Olson, Environmental Specialist, East Bay Regional Park District (1.06, 43)
Roger Wilson, Liberty Union High School District (28)
Annamaria Perrella, Executive Officer, Contra Costa County Local Agency Formation Commission (LAFCO) (3)
Ray Watetzko, Administrative Analyst, Contra Costa Mosquito and Vector Control District (4)
Leigh Jordan, Coordinator, Historical Resource Information System, Northwest Information Center, Sonoma State University (16)
Adolph Martinelli, Director, Community Development Agency, Alameda County Planning Department (17)
Gregory Gartrell, Director of Planning, Contra Costa Water District (19)
Antero A. Rivasplata, Chief, State Clearinghouse, Governor's Office of Planning and Research (20)
Daniel M. Smith, Superintendent, Liberty Union High School District (28)
Patrick Roche, TRANSPLAN Staff, TRANSPLAN Committee (Antioch-Brentwood-Pittsburg and Contra Costa County) (30)
Rick Gilmore, General Manager, Byron Bethany Irrigation District (44)
Randall Hatch, Community Development Director, City of Clayton (47)
Walter MacVittle, Chair, Discovery Bay Municipal Advisory Council (48)
Gregory G. Baatrup, Planning and Development Engineer, Delta Diablo Sanitation District (49)
Victor Carniglia, Deputy Director, Community Development, City of Antioch (50)
Brian Hunter, Regional Manager, Region 3, State Department of Fish and Game (51)
Robert K. McCleary, Executive Director, Contra Costa Transportation Authority (CCTA) (52)
Barbara Neustadter, TRANSPAC Manager, TRANSPAC Committee (Clayton, Concord, Martinez, Pleasant Hill, Walnut Creek and Contra Costa County) (53)
John Templeton, Associate Transportation Engineer, City of Concord (54)
Ellen Garvey, Air Pollution Control Officer, Bay Area Air Quality Management District (55)

Lawrence E. Ferri, Park Superintendent, State Department of Parks and Recreation (57)
Wayne S. White, Field Supervisor, U.S. Department of the Interior, Fish and Wildlife Service (59)
J. Douglas Adams, Superintendent, Brentwood Union School District (62)
Gary Binger, Deputy Executive Director, Planning Director, Association of Bay Area Governments (ABAG) (70)
Craig A. Goldblatt, Environmental Review Officer, Metropolitan Transportation Commission (71)
Ousama H. Kavar, County Engineer, County of Alameda Public Works Agency (72)
Kitty Walker, Senior Planner, San Joaquin County Community Development Department (80)

4. Organizations

Michelle Perrault, Sierra Club (1.02)
Tom Mooers, East Bay Field Representative, and Jim Sayer, Executive Director, Greenbelt Alliance (1.04, 2.30-2.34, 74)
John MacKenzie, John Marsh Historic Trust (1.16)
Rev. Ronald G. Schmit, Pastor, St. Annes Catholic Church, Byron (7)
Margaret J. Tracy, President, Board of Directors, Preserve Area Ridgeland Committee (PARC) (14)
Art Weber, Transportation Chair, Berkeley Gray Panthers (34)
Roy P. Clark, Vice President-Development Operations, Brentwood Country Club (40)
A.B. McNabney, Vice President-Conservation, Mt. Diablo Audubon Society (58)
Jim Blickenstaff, Director, Preserve Area Ridgeland Committee (64)
Seth Adams, Director of Land Programs, Save Mt. Diablo (68)
Fred Beddall, Conservation Representative, San Francisco Bay Chapter, Sierra Club (69)
Ann Broadwell, et al., Adams & Broadwell, representing Plumbers and Steamfitters, U.A. Local 159; International Brotherhood of Electrical Workers, Local 302; and International Association of Bridge, Structural, & Ornamental Ironworkers, Local 378 (85)

5. Individuals and Businesses

Denise Hollabaugh-Thom, 6850 Balfour Road, Brentwood (1.01, 2.25-2.27)
Laurie Schuyler, 2850 Loma Vista Avenue, Concord (1.17-1.20, 2.35, 9)
John Mass (2.01)
Greg Feere (2.02)
Al Courchesne (2.05)
Tom Smith (2.06)
Tom Anderson (2.07)
John Chapman (2.08-2.24)
Edith Tidrick (2.28-2.29)
Barbara Bonnickson (2.36-2.38)
David Moyal, 4214 Walnut Boulevard, Walnut Creek (6)
Michael Palucki, 2586 Chinook Drive, Walnut Creek (8)
Jerald A. Britten, 3720 Holmes Road, Oakley (10)

Ronald West, 1250 Elmwood Drive, Walnut Creek (11)
Mildred Schneidman, 2320 Ptarmigan Drive, Walnut Creek (12)
Joyce K. Laird, 860 Sibert Court, Lafayette (13)
James A. Erickson, 312 Grovewood Loop, Brentwood (15)
May Ann Hoisington, 959 Hawthorn Drive, Lafayette (18)
Barbara A. Alexander, 1980 Montclair Circle, Walnut Creek (21)
Marck Menke, 643 Francis Drive, Lafayette (22)
Cheryl and Jordon Bluestein, 3183 Wayside Plaza, Walnut Creek (23)
Lois Brubeck, 731 Cragmont Avenue, Berkeley (24)
Ione Byrnes, 332 Jerome Avenue, Piedmont (25)
Donald K. Freedman, 1547 Buckeye Court, Pinole (26)
Tino Bacchini, 1901 Concord Avenue, Brentwood (27)
Sumner Walters, Jr., 1217 Skycrest Drive, Walnut Creek (29)
Robert E. Johnson, 580 Grizzly Peak, Berkeley (31)
Glen Deardorff, 18250 Crest Avenue, Castro Valley (32)
Dan Dumont, 256 5th Avenue, San Francisco (33)
Paul W. Rea, 1101 Carey Drive, Concord (35)
Gary P. Stern, 639 Glorietta Boulevard, Lafayette (36)
David W. Halligan, 2043 Berryman Street, Berkeley (37)
Ronald A. Zampa, P.O. Box 142, Crockett (38)
John F. Hewett Chapman, 671 Clipper Hill Road, Danville (39)
Gloria Cannon/Joel Summerhill, 4801 Shavano Peak Court, Antioch (41)
William R. Cottrell, 2372 Walnut Boulevard, Walnut Creek (42)
Dave Stoeffler, P.O. Box 274, Knightsen (45)
Karen Hunt, 200 D Park Lake Circle, Walnut Creek (46)
Lorna K. Wallace, Pleasant Hill (60)
Mary Ann Hoisington, 959 Hawthorn Drive, Lafayette (61)
Gary Zimmerman, Economist (63)
Richard A. Gigliotti, New Business Land Supervisor, PG&E (65)
Rebecca Donian, 3513 Camby Road, Antioch (66)
E.S. Pancoast, 443 Verona Avenue, Danville (67)
Josephine and Fred Merritt, 355 Fir Street, Brentwood (73)
Robert and Janis Boyer, 3041 Hudson Drive, Brentwood (75)
Barbara A. Alexander, 1980 Montclair Circle, Walnut Creek (76)
Merry L. Nail, 3900 Sellers Avenue, Brentwood (77)
Marshall M. Snover, 2209 Concord Avenue, Brentwood (79)
Carol A. Davis, 3600 Vasco Road, Brentwood (81)
Karen and Ed Scally, 2211 Olympic Drive, Martinez (82)
Margarette Nail, 3900 Sellers Avenue, Brentwood (83)

B. MASTER RESPONSES

Many of the comments and responses received on the Draft EIR address the same issues. Seven specific EIR issues in particular fall into this category. These seven issues are listed below. The Master Response of the Lead Agency to comments pertaining to these seven issues are then provided. These various Master Responses are referenced throughout this response-to-comments document where these common issues are raised.

The seven common issues or topics for which Master Responses have been prepared are:

- A. Use of the Master EIR; Separation of the Current Project CEQA Needs from Anticipated Subsequent Project CEQA Needs
- B. Use of Future Studies; Deferred Mitigation
- C. Jobs Housing Balance: Assumptions and How Those Assumptions Drive the Impact Analysis
- D. Applicant's Project Changes Since Release of the Draft EIR
- E. Traffic Model Questions: Route Assumptions; Project Employment Contribution Assumptions; Analysis of Ygnacio Valley Boulevard Intersections; Justification of Assumptions Regarding Future Roadway Construction for Roadway Projects that Are Not Yet Funded or On a Funding Priority List

A Final EIR "Master Response" to each of these seven issues is provided below:

MASTER RESPONSE A. USE OF THE MASTER EIR; SEPARATION OF THE CURRENT PROJECT CEQA NEEDS FROM ANTICIPATED SUBSEQUENT PROJECT CEQA NEEDS

The "Master EIR" is a streamlining approach to environmental review that was approved by the State Legislature in its 1993 session. The Legislature, in authorizing the use of Master EIRs, recognized that it may not be possible to know and thus, fully evaluate environmental impacts from full build-out of a long-term project such as Cowell Ranch, where the current applications on file with the County and analyzed in the Master EIR--i.e., a requested general plan amendment, rezoning, preliminary development plan and development agreement--are of a more generalized or conceptual nature, some type of further environmental review will be required before approval of future final development plans or subdivision tentative maps which are intended to be a more specific development application. The process of future environment review for such subsequent projects is explained on pages I--3 through I--5 of the Draft EIR.

A Master EIR can be prepared in lieu of a project EIR, staged EIR or program EIR. A Master EIR is designed to allow lead agencies to eliminate or reduce the scope of environmental review of subsequent projects whose environmental impacts are addressed in a Master EIR.

A Master EIR is a form of "tiering" environmental review. Tiering is a process by which agencies can adopt programs, plans, policies or ordinances with EIRs focusing on the associated "big picture." This tiering approach allows a Master EIR to cover general matters, with subsequent narrower environmental review on future actions incorporating the general discussions from the Master EIR and concentrating solely on the issues specific to the environmental review subsequently prepared.

A Master EIR must identify and list all "subsequent projects" anticipated as a result of the proposed action. The identification of an anticipated subsequent project in a Master EIR does not mean that the subsequent project will not undergo further environmental review. The Master EIR must evaluate the impacts of such projects to the extent such information is available. If sufficient information is not reasonably available to allow a full assessment of its environmental impacts, then a Master EIR shall provide a description of the "potential impacts" of the anticipated subsequent project. These potential impacts will then be assessed more specifically during future review of the subsequent project, when the details (location, scope, timing, design, etc.) of the subsequent project have been more fully identified. During this future review, the lead agency will determine to what degree the impacts of the subsequent project were analyzed in the Master EIR, and whether further environmental review is necessary to provide adequate environmental documentation.

With respect to Cowell Ranch, at the time a future application for a final development plan or tentative subdivision map (which are listed as anticipated subsequent projects at page III-48 of the Draft EIR) is considered for approval, the lead agency will first determine if the Master EIR analyzed the full extent of environmental impacts that can result from those approvals. If the lead agency cannot find that the Master EIR adequately analyzed the environmental impacts that may result from those applications (the specific findings shall be made as required by Public Resources Code section 21157.1(c)), either a mitigated negative declaration or a more focused environmental impact report will need to be prepared before the approval occurs.

Because the use of the Master EIR is new, there is no case law (as of February 15, 1998) interpreting its use. However, the California Resources Agency has prepared and approved CEQA Guidelines for Master EIRs and other components of CEQA. A copy of the Guidelines as they relate to Master EIRs is on file at the Contra Costa County Community Development Department. These Guidelines have been the subject of extensive public review and comment, and have been considered in the preparation of the Cowell Ranch Project EIR.

With respect to the discussion of "anticipated subsequent projects," a new guidelines (section 15176) has been prepared that states, in pertinent part:

A lead agency shall include in a Master EIR all of the following...

(b) A description of anticipated subsequent projects that are within the scope of the Master EIR, including information with regard to the kind, size, intensity, and location of the subsequent projects, including, but not limited to all of the following:

(1) The specific type of project anticipated to be undertaken such as a single family development, office-commercial development, sewer line installation or other activities.

(2) The maximum and minimum intensity of any anticipated subsequent project, such as the number of residences in a residential development, and with regard to a public works facility, its anticipated capacity and service area.

(3) The anticipated location for any subsequent development projects, and, consistent with the rule of reason set forth in Section 15126, subdivision (d)(5), alternative locations for any such projects.

(4) A capital outlay or capital improvement program, or other scheduling or implementing device that governs the submission and approval of subsequent projects, or an explanation as to why practical planning considerations render it impractical to identify any such program or scheduling or other device at the time of preparing the Master EIR.

(c) A description of potential impacts of anticipated projects for which there is not sufficient information reasonably available to support a full assessment of potential impacts in the Master EIR. This description shall not be construed as a limitation on the impacts which may be considered in a focused EIR.

(d) Where a Master EIR is prepared in connection with a project identified in subdivision (b)(1) of section 15175, the anticipated subsequent projects included within a Master EIR may consist of later planning approvals, including parcel-specific approvals, consistent with the overall planning decision (e.g., general plan, or specific plan, or redevelopment plan) for which the Master EIR has been prepared. Such subsequent projects shall be adequately described for purposes of subdivision (b) or of this section (15176) if the Master EIR and any other documents embodying or relating to the overall planning decision identify the land use designations and the permissible densities and intensities of use for the affected parcel(s). The proponents of such subsequent projects shall not be precluded from relying on the Master EIR solely because that document did not specifically identify or list, by name, the subsequent project as ultimately proposed for approval.

Portions of the Draft EIR have been further clarified as reflected in section IV of this Final EIR document, Revisions to the Draft EIR (Errata), to more specifically acknowledge that some of the project-related environmental impacts cannot be determined or assessed until a future date. Specifically, with respect to a long-term water source for treated and raw water for the Cowell Ranch project, the Draft EIR has discussed and analyzed various water options. The Draft EIR included all reasonable information available on the various water supply options

and analyzed the potential impacts of the various options. Unlike the EIR in Stanislaus Natural Heritage Project v. County of Stanislaus (1996) 48 Cal.App.4th 182, the Cowell Ranch Master EIR does not defer or ignore the analysis of supplying water. The Cowell Ranch EIR recognizes that water must be supplied to the project, and that it can come from one of the possible options analyzed in the EIR, and analyzes the comparative impacts that could result from each of those options and suggested ways to address those impacts.

MASTER RESPONSE B. USE OF FUTURE STUDY; DEFERRED MITIGATION

The Cowell Ranch application--a requested general plan amendment, rezoning, preliminary development plan, and development agreement--includes a preliminary level of project detail. Accordingly, the Master EIR includes as much information as feasibly possible at this planning phase to address the general plan amendment, rezoning, preliminary development plan, development agreement and future development activities consistent with those applications. As allowed by CEQA, the Master EIR recognizes that there are future activities that cannot be feasibly and completely analyzed at this time (CEQA Guidelines section 15176(c)). Such future activities will be subject to additional environmental review consistent with the Master EIR requirements. Some of the impacts and associated mitigation measures will be addressed in further detail at the time subsequent activities and projects are brought forward. This approach is not considered an inappropriate deferral of environmental review and is permitted with the use of a Master EIR. The Master EIR does not defer all consideration of impacts to a later time; rather it legitimately indicates that more detailed information would be considered at a future time when site specific proposals are brought forward. As recognized by CEQA, the specificity of the Master EIR's discussion of mitigation measures is proportionate to the specificity of the underlying project applications.

CEQA does not preclude the consideration or approval of a project in situations in which the formulation of precise means of mitigating impacts is infeasible or impractical at the initial project stage. For impacts for which mitigation is known to be feasible, but where practical considerations prohibit devising mitigation measures early in the planning process (e.g., at the general plan amendment or rezoning stage), a commitment can be made to eventually devise measures that will satisfy specific performance criteria articulated at the time of the initial project approval. (e.g., Sacramento Old City Assn. v. City Council (1991) 229 Cal.App.3d 1011.) By way of example, this approach has been followed with respect to the analysis of soils and geology, and water and sewer impacts. In instances where impacts for which mitigation is not known to be feasible at this time, a more generalized analysis of the impact appears in the Master EIR. In this case, more specific analysis of the environmental effects and more specific mitigation measures will be identified at a later time when more details are known and available on the project. (A Local and Regional Monitor v. City of Los Angeles (1993) 26 Cal.App. 4th 630.)

In direct response to some of the comments made on the Draft EIR, changes have been made to more specifically acknowledge that the mitigation of some of the potentially significant

environmental impacts cannot be determined until a future date (see section IV, Revisions to the Draft EIR (Errata)). As a result, with respect to some of the impacts for which mitigation is not known to be feasible at this time, the mitigation conclusion has been changed to state that consistent with the Master EIR approach, additional information will be required to adequately determine if the impact has been mitigated to an insignificant level. Until that information can be provided, those particular impacts have been identified as significant and unavoidable.

Water Supply. Comment 63.05 specifically refers to a legal case (Stanislaus Natural Heritage Project v. County of Stanislaus (1996) 48 Cal.App.4th 182) that stands for the proposition that an environmental impact report cannot defer all analysis of the significant environmental effects of supplying water. The Cowell Ranch EIR does not defer the analysis of supplying water. Rather, the Draft EIR includes all reasonable information available on the various water supply options and analyzes the potential impacts of the various options. Unlike the EIR in the Stanislaus Natural Heritage Project case, the Cowell Ranch EIR does not inadequately defer or ignore the analysis of supplying water. The Draft EIR provides a similar analysis for sewer supply. The analysis considers all possible sewer supply options. The specific sewer option will be determined at a future time when site-specific development proposals are available. If the option selected causes an adverse significant environmental impact that has not been analyzed or mitigated by the Master EIR, subsequent environmental review will be required consistent with the Master EIR process.

MASTER RESPONSE C. JOBS/HOUSING BALANCE ISSUES

(1) Mechanism/Binding Requirement to Ensure Housing/Jobs Balance:

The Draft EIR includes a mitigation combination designed to work together to provide such a mechanism, including:

- **Mitigation LU-3**, a mitigation mechanism for **Impact LU-3: Impacts on Regional Housing Needs**, which requires applicant formulation of a project *Housing Strategy* for county approval that specifies project housing affordability goals, and an associated *Housing Mix and Affordability Monitoring Program* that establishes a process of annual evaluation of the *Housing Strategy* progress in meeting its affordability goals;
- **Mitigation LU-11**, a mitigation mechanism for **Impact LU-11: Onsite Jobs/Housing Balance**, which requires applicant formulation of a project *Employment Development Program (EDP)* for county approval that includes:
 - onsite jobs/housing targets (jobs-per-employed resident targets for each 5-year increment of project buildout),
 - infrastructure phasing to foster early and continuous employment development,
 - an employment development marketing strategy,
 - a hiring program,
 - a housing affordability program (linked with *Mitigation LU-3*),
 - an annual reporting procedure, and

- an ongoing Monitoring and Enforcement Program, and
- **Mitigation T-1**, a mitigation mechanism for **Impact T-1: Offsite Traffic Conditions Exceeding Level of Service Standards**, which requires applicant demonstration to County satisfaction that a specific combination of measures, including "management of project buildout to foster a balance between new residential and job development" (DEIR pages II--15 and IV.C--53 through 59) "would achieve compliance with the applicable roadway system **performance standard** in effect for each primary, secondary, and regional roadway system component identified in the program EIR as subject to a *potentially significant impact*. The specific residential/job development balance mechanism identified in the Draft EIR under this mitigation is the *Employment Development Plan (EDP)* process described under **Impact LU-11**

These three mitigations are expected to work together to create reasonable incentives to ensure that, over time, a substantial percentage of project residents will work onsite.

In particular, Mitigation LU-3 (Onsite Housing/Jobs Balance) includes establishment and incorporation of measures into the project which are intended "to link the development of onsite housing and jobs more closely." The required measures include establishment of an *Employment Development Program (EDP)* which outlines "a project marketing strategy designed to attract desirable employment-generating uses to the site (e.g., uses that generate employment types and salary levels commensurate with project housing costs), as well as provisions for implementing this strategy" (DEIR page IV.A--59). Most importantly, establishment of a system of annual reporting, monitoring, and enforcement is required that demonstrates project progress in promoting an improved balance between housing and jobs (DEIR pages IV.A--61 and 62). The required Monitoring and Enforcement Program includes county review of a required *EDP Progress Report* (1) each year, (2) prior to any "substantial" subsequent individual development approvals for the project site (with "substantial" to be determined the County's standard CEQA-based Initial Study process), and (3) at any other times determined appropriate by the Board of Supervisors. The Draft EIR states on page IV.A--61 that "if it is determined during formal review of the *EDP Progress Report* that the jobs-per-employed-resident targets have not been achieved, the Board of Supervisors (or Brentwood City Council) should establish a limit on the issuance of future onsite residential building permits" (DEIR page IV.A--61).

The inter-linking (cross-referencing) in the Draft EIR between mitigations LU-3, LU-11, and T-1 (see Draft EIR pages IV.A--59 and 60, and IV.C--59) ties these three measures to "compliance with the applicable roadway system **performance standard**" in effect for each significantly impacted roadway system component (see DEIR page IV.C--53).

Each individual future development application within the Cowell Ranch project that the County determines through its standard CEQA-based Initial Study process may have a significant traffic impacts, must meet this **performance standard** compliance requirement (see DEIR page IV.C--53).

(2) No Evidence or Basis to Support Beneficial Housing/Jobs Balance Conclusion:

The requested explanation is provided on Draft EIR page IV.A--40 and 41 (beginning with the third paragraph on page IV.A--40). The Draft EIR describes a potential for the project at its interim stages and "at buildout" to "in general," "improve the balance in Brentwood between jobs and housing opportunities" (underline added). The statement simply means that if the proposed project buildout residential and job totals are achieved, then the project would improve the cumulative local balance between housing and jobs, as explained more fully on DEIR page IV.A--40. If these buildout totals are not achieved, a positive jobs/housing balance effect would not occur; hence the more substantive Draft EIR findings of a potentially significant adverse jobs/housing balance impact are identified under Impact LU-11. The Draft EIR places particular emphasis on this potential adverse jobs/housing balance impact, and on the adoption of an associated comprehensive mitigation program (under impacts and mitigations LU-3, LU-11, and T-1).

(3) Project Would Exacerbate Regional Housing/Jobs Balance:

The Draft EIR places particular emphasis on project potentials for exacerbating regional housing/jobs balance deficiencies, and on the need to establish an adequate, comprehensive mitigation program to avoid such adverse impacts, as explained under (1) above.

(4) A Cumulative Analysis of Future Jobs/Housing Relationship is Needed; Housing/Jobs Impact Analysis Should Include Consideration of Regional Cumulative Housing and Jobs Development Trends, Including the Tri-Valley Area, San Joaquin County, and Santa Clara County; the Analysis Should be Supported by a Regional Market Study:

The interregional link between housing and jobs is the transportation system. The issue of housing/jobs relationships within a project and a project vicinity is addressed because of its effect on commute period traffic levels, and associated traffic congestion and air quality impacts. The Draft EIR analysis of project-related trip distribution and associated housing/jobs relationships includes adequate consideration of project interregional relationships to employment and housing centers in east, central and western Contra Costa County, the Tri-Valley area, Alameda County, San Joaquin County, and other (outside Contra Costa) locations--i.e., residential and job destinations external to the Bay Area including anticipated trips across the Altamont pass, across the San Joaquin County line, and across the Santa Clara County border (via I-580, SR 17, and US 101), as indicated by Tables 24 and 25 on DEIR pages IV.C--47, and as explained on Draft EIR pages 4, 5, and 7 and in Draft EIR Appendix C.

Regarding the suggested need for a regional market study, Appendix C of the EIR explains that the housing and job growth projections included in the traffic model for the year 2010 are consistent with projections included in other regional models developed by MTC (i.e., its regional transportation model), the County's countywide model, and other subarea models being developed by the Contra Costa Transportation Authority. As explained in the Draft EIR Appendix C, the year 2015 and 2020 demographic and land use data used in the traffic

modelling for the EIR were developed with the assistance of Recht Hausrath & Associates, urban economists, working in consultation with County staff. The projections included consideration of the trends reflected in the existing regional models cited above, as well as the professional judgment of Recht Hausrath & Associates regarding projected housing and employment growth issues and trends throughout the nine-county Bay Area and San Joaquin County (see footnote at bottom of DEIR page IV.A--40).

(5) Numerical Housing/Jobs Balance Standard Not Necessarily Effective:

The comment suggests that achievement of a simple, numerical jobs-housing balance ratio will not assure a corresponding reduction in traffic congestion, and states that academic research has shown that the provision of a self-contained community is required to see such benefits.

The Draft EIR specifically acknowledges this point on page IV.A--40, stating "it is important to note, however, that a simple numerical balance in the jobs/housing ratio does not necessarily indicate that local residents will have the opportunity to work in their community."

As defined by the applicant, one of the "basic objectives" of the Cowell Ranch project is to provide for "a balance of uses that would work together to support broad human needs as a largely self-contained community within the City of Brentwood" (see Draft EIR pages III--9 and III--11). The project proposes a mixture of housing at various densities, retail and other commercial uses located in two "village cores," a business park, parks and other community facilities, and open space. The provision of jobs, retail stores and community facilities in an area that would clearly assist in reducing the average vehicular trip length. The Draft EIR evaluates the potential effectiveness of these internal land use relationships and identifies mitigations in section IV.A, Land Use, to ensure that the project develops as a "self-contained community," including measures to promote affordable housing, coordinated development of jobs and housing opportunities, resident access to onsite jobs and services, and compatibility between onsite residential, commercial, and transportation uses (see *Mitigations LU-3, LU-11, LU-12, LU-14, LU-15, and LU-16*).

The traffic model used as a basis for the Draft EIR traffic analysis assigns project residents to jobs (and project workers to housing) throughout the area and region. Draft EIR Tables 24 and 25 show the AM peak hour trip distribution for project Phases I and II that resulted from this modeling process. The tables demonstrate that no special assumptions regarding project residents working onsite or project workers living onsite were incorporated into the traffic model.

In order to ensure that project residents have the opportunity to work onsite and that project workers also have the opportunity to live there, *Mitigation T-1* of the Draft EIR calls for use of performance standards to ensure adequate roadway improvements and an adequate balance between onsite jobs and housing units. In addition, *Mitigation LU-11* (Draft EIR, pages IV.A--59 through IV.A--62) requires the applicant to submit an *Employment Development Program (EDP)* that includes (a) onsite jobs/housing targets, (b) infrastructure phasing, (c) an

employment development marketing strategy, (d) a hiring program, (e) a housing affordability program, (f) an annual reporting procedure, and (g) an ongoing monitoring and enforcement program. These mitigations are expected to create reasonable incentives to ensure that, over time and beyond project buildout, a certain percentage of project residents also work onsite and vice-versa.

(6) There is No Explanation of the Basis for the Contra Costa Transportation Authority (CCTA) Estimates of Available Jobs for the Year 2010. Do the CCTA Housing and Jobs Projections Cited in the Analysis for the "Brentwood Area" and "Rural Unincorporated East County" Include the Project and Other Planned Projects?

The East Contra Costa County traffic model developed by the CCTA was used to complete the traffic impact analysis. The model is a focused version of the Contra Costa County travel demand model developed for use in the County's General Plan Update program in the late 1980s. A description of the EIR traffic analysis modelling methodology, including how the CCTA East County Traffic Model was applied to properly analyze the impacts of the Cowell Ranch project, is included in Appendix C of the Draft EIR. The projections on Draft EIR page IV.A--4 (i.e., Table 8) of estimated jobs in the "Brentwood Area" and "Rural East Contra Costa County" by the year 2010 do exclude the Cowell Ranch project, as explained on Draft EIR pages IV.A--40 and 41 (beginning with third paragraph on page IV.A--40).

(7) What is the Basis for the Contra Costa Transportation Authority Estimate of Available Jobs for the Year 2010?

The model software and data impact assumptions are generally consistent with other regional models developed by the Metropolitan Transportation Commission (MTC) regional traffic model, the County's countywide model, and other subarea models being developed by the Authority. For the purposes of this EIR, the EIR transportation planners, DKS Associates, in consultation with County staff, prepared a refined zone structure for the East County which reflected the most current information regarding recently approved, pending, and anticipated projects in the East County area, and for the existing conditions, excluded any development of the Cowell Ranch project.

The projections on Draft EIR page IV.A--4 of available jobs for the year 2010 by Contra Costa Transportation Agency are dated 1996, and incorporate the updated DKS figures; i.e., exclude the Cowell Ranch project.

(8) Project Site Job Attraction Deficiencies and Oversupplies of Better Commercial Land Will Prevent Job Growth at Cowell Ranch:

The transportation model projections described above, and the jobs/housing balance mitigation objectives included in the Draft EIR under impacts LU-4, LU-11, and T-1 were formulated based on consideration of numerous interregional economic and land use issues and trend factors, including issues of relative project competitiveness with other employment centers throughout the region. The Cowell Ranch project proposes a 30-year buildout period.

Development of reliable 30-year projections of the competitiveness of the East Contra Costa County with other employment centers in the region which are sufficiently reliable to provide a basis for adoption of mitigation measures today was considered to be too highly speculative for CEQA purposes. The alternative mitigation approach that has been selected and described in the EIR involves a required program of ongoing jobs versus housing growth monitoring and reporting, as a means of reducing corresponding commute traffic and roadway congestion, and most importantly, required project demonstration that adopted roadway operational **performance standards** in effect can be met for all local and interregional roadways identified as potentially subject to a significant project-related operational impact, as a condition of each future individual development approval within the project (i.e., future residential subdivision tentative maps, etc.).

*(9) Response to Questions about Draft EIR Assumptions Regarding the New **Community College** Component of the Project:*

The proposed community college was assumed to generate 267 jobs by the year 2010, or approximately five percent of the projected year 2010 total of 5,485 onsite jobs (see DEIR page III--43, Table 7). The EIR is required to analyze the project as proposed, regardless of funding prospects. The project as proposed included development of a community college campus by the year 2010 (see Table 5 on DEIR page III--38 and 39); for this reason development of a community college was assumed by the year 2010 in the traffic analysis.

MASTER RESPONSE D. APPLICANT'S PROJECT CHANGES

The applicant has made, and might continue to make, changes to the proposed project (general plan amendment, rezoning, preliminary development plan, and development agreement) since release of the Draft EIR. These changes are discussed in comment 84.01 and are summarized below:

- Cowell Ranch Parkway has been realigned to avoid the John Marsh Home State Park site; as revised, the closest right-of-way is located across Marsh Creek, 400 feet from the John Marsh Home;
- Planning Areas 31 and 32 have been redesigned to address visual and biological impacts;
- the General Plan Amendment map has been revised to depict a 40-acre "reserve high school site" at the location requested by the Liberty Union High School District; and
- the proposed Urban Limit Line modification has been changed slightly to reduce the area involved from 262 acres to 253 acres to more accurately reflect topographic characteristics of the site (the ULL change results from the changes to Cowell Parkway and Planning Areas 31 and 32 described above).

This process of project revision represents common practice and reflects the intent of the CEQA process (i.e., to induce project modification as warranted to reduce or avoid identified significant adverse environmental impacts). If the Final EIR is certified and if the project is advanced, the County will continue to review the latest project revisions following the normal post-EIR development review process, to determine whether the changes adequately incorporate the conditions of project approval, including all adopted EIR mitigations. There is no state- or County-adopted CEQA implementation guideline which requires the EIR to be continually updated and recirculated to reflect post-Draft-EIR changes in a project, provided that the changes do not result in a significant additional environmental impact or mitigation need not considered in the Draft EIR.

MASTER RESPONSE E. TRAFFIC MODEL QUESTIONS

(1) Route Assumptions (Trip Distribution):

Draft EIR Tables 24 and 25 were in error, since internal project trips were double-counted. These tables have been updated and are included in section IV (Revisions to the Draft EIR (Errata)). The updated tables show a significant reduction for internal project trips and an increase in trips at all other locations. The result is that, for the AM peak hour, 14.2 percent of the project trips would be outside the East County area under the Year 2010 With Project scenario, with the figure increasing to 17.3 percent under the Year 2026 With Project scenario. These revisions do not significantly change any of the associated roadway operation impact conclusions or mitigation recommendations in the Draft EIR.

While the work trips do include trips by specialized professionals with a smaller number of employment options, they also include trips by non-professional employees, such as restaurant and retail workers. The latter typically do not travel long distances to their place of employment.

The probable travel length of work trips is based on a curve developed by the Metropolitan Transportation Commission (MTC) and used in the Contra Costa Transportation Authority (CCTA) models. Because the probabilities are based on travel time, increased traffic congestion creates shorter lengths for work trips.

The jobs/housing imbalance is recognized by many transportation professionals as a major reason why many commuters travel very long distances to reach their places of employment. "Bedroom" communities such as Brentwood, Oakley, and most of the East County area primarily contain residential land uses with few employment centers. Given the high price of real estate in the San Francisco Bay Area, many first-time home buyers have few options but to purchase homes in less expensive subregions that are long distances from their places of employment. Thus, commuters do not prefer to travel long distances, but are compelled by economic and geographic forces to make long-distance commutes. Construction of the Cowell Ranch project in the phasing sequence described in the Preliminary Development Plan

would improve the jobs/housing balance in East County, and reduce the overall commute distance, thereby reducing the average vehicle miles traveled (VMT).

A number of comments regarding the trip distribution issue referred to the "trip distribution assumptions" of the traffic model. The travel demand forecasting model used in this analysis does not use trip distribution assumptions as input. The model is simply given the location and size of residences, jobs, retail, and other land uses. The model then generates trips for each of these land uses and estimates the number of trips between these various land uses in a process called "trip assignment." The final trip distribution is a product of this process. The assumptions that the model uses in determining trip distribution are based on certain factors such as the disutility (i.e., cost) of travel time and parking costs. These assumptions are provided by MTC. Appendix C of the Draft EIR provides a detailed discussion of the travel demand forecasting model used in this analysis.

(2) Project Employment Contribution Assumptions:

Table 21 on page IV.C--35 of the Draft EIR shows the employment estimates developed by the Contra Costa Transportation Authority (CCTA). These estimates indicate a total increase of over 46,000 jobs in the East County area from 1990 to 2005. The City of Brentwood alone shows an increase of over 13,000 jobs during this period. Thus, it is not unreasonable to assume a large increase in employment in the East County area, including a large contribution of jobs from development of Phase I (2001-2010) of the Cowell Ranch project.

(3) Analysis of Ygnacio Valley Boulevard Intersections:

Figure 33 of the Draft EIR shows the location of study intersections. As indicated in the figure, the intersections of Kirker Pass Road/Buchanan Bypass, Kirker Pass Road/Concord Boulevard, Kirker Pass Road/Clayton Road, and Ygnacio Valley Road/Alberta Way were analyzed in the Draft EIR.

Additional analysis was performed as part of this response to comments for a number of intersections in the Central County area. Traffic volumes for these locations were taken from the Central County traffic model and the project traffic was added appropriately. The results of this analysis are shown in the revised Tables 30 and 31 (see section IV, Revisions to the Draft EIR (Errata)).

(4) Justification of Assumptions Regarding Future Roadway Construction for Roadway Projects That Are Not Yet Funded or on a Funding Priority List:

The standard approach to performing an analysis of future year scenarios is to make assumptions both about the expected land use in the future year and the expected roadway improvements. For purposes of this EIR analysis, the list of expected roadway improvement assumptions was developed in collaboration with the Contra Costa County Community Development Department and is, in general, consistent with the Metropolitan Transportation Commission's Regional Transportation Plan (RTP) and the East Contra Costa Transportation

Strategic Plan. These documents constitute the best estimate of what transportation improvements can be reasonably expected by the years 2010 and 2026.

It is usual for future year analyses such as these to contain projects for which no specific source of funding exists, since it is rare that a specific funding source has been identified for a project 30 years before it is scheduled to be completed. In particular, developing areas frequently have many roadway improvements that are funded by developer contributions. Completion of these improvements are typically required as a condition of development approval.

The 30-year development period for the proposed Cowell Ranch project would extend well beyond the capital improvement programming (CIP) process undertaken by public agencies. The CIP process takes into account funds that are accrued through developer contributions and collection of impact fees. Thus, it is highly unlikely that any publicly-funded portion of the longer-term improvements associated with the project could be fully committed at the present time.

It is also important to note that, in accordance with recent legal decisions, a "nexus" must be established between a project's impact and required mitigation. This means that a project can only be required to complete improvements to offset significant impacts that are directly the result of the proposed project. For cumulative impacts (i.e., impacts created by the project combined with other development), the project can only be required to contribute its fair share to any required improvements.

Mitigation T-1 requires that, as a condition of approval for each individual future development application on the project site that may have a significant traffic impact, the applicant shall demonstrate compliance with applicable roadway system performance standards. This may be achieved through fair-share funding of offsite roadway intersection and roadway link improvements, use of travel demand management measures, and management of project buildout to achieve a jobs/housing balance. This measure would ensure that adequate roadway improvements are in place before specific development proposals on the project site are approved.

C. RESPONSES TO ZONING ADMINISTRATOR PUBLIC HEARING COMMENTS

The following section presents the written responses to substantive comments made at the November 18, 1996 and December 11, 1996 Zoning Administrator public hearings regarding the adequacy of the Draft EIR. A transcript of the November 18 and December 11, 1996 public hearings is presented in Volume 1 of this Response Document. Comments and responses are correlated by code numbers added to the margins of the transcript.

Responses to Contra Costa County Zoning Administrator November 18, 1996 Public Hearing Comments:

Denise K.H. Thom, 6850 Balfour Road, Brentwood

- 1.01 The Contra Costa County Zoning Administrator held two public hearings on the EIR: (1) a daytime hearing on November 18, 1996 at the Contra Costa County Board of Supervisors chambers in Martinez; and (2) an afternoon and evening hearing on December 11, 1996 at the Brentwood City Council chambers in Brentwood. Public hearings will be held on the proposed project before a joint meeting of the County Planning Commission and the East County Regional Planning Commission, as well as before the Board of Supervisors.

Michelle Perrault, Sierra Club

- 1.02 Please refer to the response to Comment 1.01 above. The Draft EIR was distributed for public review and comment on October 18, 1996. The required 45-day public review period on the Draft EIR ended on December 2, 1996. The County extended the public review period to March 19, 1997, to allow more time for interested agencies and individuals to submit written comments.
- 1.03 Background documents referenced in the Draft EIR have been available through the Contra Costa County Community Development Department since the start of the Draft EIR public review period.

Tom Mooers, Greenbelt Alliance

- 1.04 Please refer to the response to Comments 1.01 and 1.02 above.

Mitch Oshinsky, City of Brentwood

- 1.05 The Contra Costa County Zoning Administrator held second and third public hearings on the EIR on the afternoon and evening of December 11, 1996 at the Brentwood City Council chambers in Brentwood.

Brad Olson, East Bay Regional Park District

- 1.06 The highest traffic volume projected in the Draft EIR on Marsh Creek Road in the vicinity of Round Valley Regional Park for any of the scenarios analyzed is 672 vehicles per hour. This results in a capacity of approximately 400 vehicles per hour for left-turns by vehicles from a minor side street onto Marsh Creek Road. Even with a minor street demand of 200 vehicles per hour for this movement, the average delay would be approximately 17 seconds. The capacity for vehicles turning left off of Marsh Creek Road is more than double that for vehicles turning left on to Marsh Creek Road.

Based on this analysis, there is adequate capacity for vehicle movement on and off Marsh Creek Road from side streets without significant delay. The analysis was conducted using the methodology contained in the *1994 Highway Capacity Manual* - Chapter 10 - Unsignalized Intersections.

- 1.07 The Draft EIR projected that the project would have a potentially significant impact on traffic conditions for the portion of Deer Valley Road north of Balfour Road and states that widening this portion of Deer Valley Road would reduce the project's impacts to a less-than-significant level. Increased traffic would not necessarily increase safety risks for drivers or other roadway users. Any widening would be reviewed and approved by the appropriate public agencies, with attention given to safety concerns.

The portion of Deer Valley Road south of Balfour Road was analyzed using the significance standards described in the Draft EIR. It was determined that the project would not have a significant impact on this roadway segment.

- 1.08 State Route 4 Bypass will be a newly constructed facility with four lanes between State Route 4 and Lone Tree Way and grade-separated interchanges at Lone Tree Way and Sand Creek Road. Even in the year 2026 With Project scenario, this roadway is not expected to operate at capacity with the mitigation measures recommended in the Draft EIR. Thus, significant diversion off of this road is not likely to occur.

The design speed of Morgan Territory Road is low enough compared to the congested speed of Vasco Road that diversion from Vasco Road to Morgan Territory Road is unlikely.

- 1.09 The Draft EIR addresses project relationships to and impacts on views from Round Valley and Morgan Territory on Draft EIR *pages IV.J-48 through IV.J--50*, including *Impact V-8 and Mitigation V-8; Impact V-9 and Mitigation V-9*. In response to this comment, these visual impact descriptions have been revised to add specific reference to the visual impact implications of proposed cut and fill depths in visible development areas (see errata herein for pages IV.J--48, 49, and 50).

- 1.10 The comment requests information on how the flooding and water quality impacts on Marsh Creek would affect the proposed trail along the creek.

The commenter refers to a concern about "project induced flooding" along Marsh Creek. As described under *Impact D-4*, the project would not increase or "induce" flooding along Marsh Creek; this is an existing condition. Nevertheless, this existing flooding condition is identified as a potentially significant impact, the correction of which is addressed through *Mitigation D-4*. The plans for resolving the existing flood capacity problems along Marsh Creek are to be the subject of additional work and, as noted in this comment, accommodation of the proposed creekside trail should be considered in any channel improvement plans.

With regard to water quality, the project drainage plans include the construction of "water quality" basins to capture urban runoff pollutants associated with the development of the site; one such basin is planned for the area that drains into Marsh Creek; see response to Comment 67.19. Additionally, the commenter is referred to pages IV.E--30 through IV.E--34 of the Draft EIR for discussion of water quality impacts and mitigation measures associated with urban and golf course runoff.

The County could consider involving the East Bay Regional Park District in the review of Marsh Creek-related issues as part of the decision on the project.

- 1.11 Project effects in increasing the demand for East Bay Regional Park District facilities (additional users) are described on Draft EIR pages IV.F--69 and 70. All new residential development in the park district results in similar per-capita impacts on regional park needs.

Regarding the related service cost implications, a portion of all property taxes collected within the park district (a taxing entity) is allocated to fund ongoing district operational costs, including the costs of park police, fire, maintenance, interpretive staff, and other ongoing operations. The added park district allocations of property assessments from project residential development would fund project-related increases in ongoing park operational costs. In any event, such fiscal issues are not "environmental" concerns requiring EIR consideration under the California Environmental Quality Act. The CEQA Guidelines section 15131 states that economic effects may not be identified as significant environmental impacts unless there is a chain cause and effect from the economic impact to an adverse physical (environmental) impact.

- 1.12 Use of the project site by San Joaquin kit fox has yet to be documented. The biological resources evaluation in the Draft EIR assumes that kit fox may use the site. The extent of kit fox movement between Round Valley Regional Park and Black Diamond Mines Regional Preserve is currently unknown. Cowell Ranch is located well east of the direct route between Round Valley and Black Diamond Mines. The project proposes that the Briones Valley portion of the site and lands between the Briones Valley and Marsh Creek Road remain undeveloped. It is therefore unlikely that the proposed project would substantially affect kit fox movement between these two parks.

Most high-speed roads proposed by the project would be surrounded by urban development. It is unlikely that kit foxes would be moving across high-speed roads with urban development on either side. Major thoroughfares and other arterial streets, particularly those connecting residential areas separated from the village centers by open space, would be equipped with exclusionary fencing (see page IV.G--49 of the Draft EIR). The exclusionary fencing would direct kit foxes moving through open space corridors to road undercrossings designed to facilitate kit fox movement. These

measures are expected to reduce traffic mortality to kit foxes to a less-than-significant level.

- 1.13 Project impacts on wetlands were determined using the wetland delineation prepared by Zentner and Zentner in 1993 (see page IV.G--37 of the Draft EIR). This delineation was verified by the U.S. Army Corps of Engineers on April 5, 1994. Wetlands on the site are shown in Figure 54 of the Draft EIR. Some of these wetlands are wet grassy swales that function ecologically like other non-native grasslands of the site and were described in the Setting section under "Non-native Grassland". Impacts on such areas are nonetheless considered "potentially significant", as discussed under *Impact BR-4 (Loss of Jurisdictional Waters)*, and mitigation has been required, as described under *Mitigation BR-4*.

As noted in the Draft EIR (pages IV.G--8 and IV.G--9), some areas identified by Zentner and Zentner as "wet meadow" appear to be inundated during portions of the winter and spring. Such areas also support some plants common to vernal pools. The EIR requires an inventory of such areas for their attributes, including the presence of various species of freshwater shrimp federally listed as threatened or endangered, so that they can be replaced in kind. Such an inventory was conducted by Huffman and Associates for the project applicant during the winter of 1996-97.

- 1.14 At the time that the Draft EIR was prepared, the U.S. Fish and Wildlife Service (USFWS) mitigation requirements were a 3:1 compensation ratio for each acre of natural (suitable) San Joaquin kit fox habitat and 1:5 for each acre of disturbed or marginal habitat. Recent discussions with the USFWS confirm that mitigation requirements are now calculated somewhat differently from one year ago. Mitigation for orchards and row crops adjacent to suitable kit fox habitat is now 1.5:1 for only that area located within 300 feet of the given orchard's or field's perimeter. The EIR did not consider the orchard to be suitable kit fox habitat. Accordingly, mitigation was not required for the loss of the orchard. Ultimately, the maximum amount of mitigation required and the appropriate locations where such mitigation shall take place will be determined by means of consultation and negotiation among the applicant, the California Department of Fish and Game, and the U.S. Fish and Wildlife Service, as noted on page IV.G--51 of the Draft EIR.
- 1.15 Please refer to the response to Comment 43.04 regarding the East Bay Regional Park District Master Plan. *Impact PF-16* in section IV.F.5 (Public Facilities and Services, "Parks and Recreation") of the Draft EIR addresses project impacts on regional park services, and *Impacts V-8* and *V-9* in section IV.J (Visual Factors) address project impacts on views from EBRPD's Round Valley Regional Park and Morgan Territory Regional Preserve.

John Mackenzie, John Marsh Historic Trust

- 1.16 Page IV.I-16 of the Draft EIR includes a mitigation measure for project roadway impacts on the John Marsh House property. Mitigation measure CR-4 states "Avoid the John Marsh house and its contributory setting. If avoidance is not feasible, develop and implement an appropriate mitigation program in cooperation with the California Department of Parks and Recreation." As part of their response to the Draft EIR, the applicant has realigned Cowell Ranch Parkway to avoid the John Marsh Home State Park site. As revised, the closest right of way is located across the creek, approximately 400 feet north of the John Marsh Home. The realignment retains the John Marsh Home site in its existing configuration.

Laurie Schuyler, 2850 Loma Vista Avenue, Concord

- 1.17 Please refer to Master Response C, item 7, and Master Response E, item 2, regarding project employment assumptions; and see Master Response C, item 9, regarding EIR assumptions pertaining to the proposed new community college.
- 1.18 Figure 33 shows the study intersections for the Draft EIR. The intersections of Kirker Pass Road/Buchanan Bypass, Kirker Pass Road/Concord Boulevard, Kirker Pass Road/Clayton Road, and Ygnacio Valley Road/Alberta Way were analyzed in the Draft EIR.

Additional analysis was performed as part of this response to comments for a number of intersections in the Central County area. Traffic volumes for these locations were taken from the Central County model and the project traffic was added appropriately. The results of this analysis are shown in revised Tables 30 and 31 (see section IV, Revisions to the Draft EIR (Errata)). This analysis does not produce any changes to the Draft EIR's conclusions regarding project and cumulative traffic impacts.

- 1.19 A number of the 1993 traffic counts conducted for the Draft EIR show that traffic is much heavier in one direction than the other. The cause of this is the largely residential nature of the East County area. This situation results in a significant amount of *unused* capacity in the non-peak direction. Future, new jobs in the East County would generally be filled by commuters traveling in the non-peak direction, utilizing the unused capacity of the roadway. (Please refer to the response to Comment 2.13 for more discussion of the jobs-housing imbalance.)
- 1.20 Please refer to Master Response E, item 4, regarding future roadway construction assumptions.

Responses to Contra Costa County Zoning Administrator December 11, 1996 Public Hearing Comments:

John Mass

- 2.01 The commenter speaks in favor of the project and in favor of the State Route 4 Bypass (previously known as the Delta Expressway) and its benefits to the Brentwood area. As indicated in *Mitigation T-1* of the Draft EIR, the Cowell Ranch project would contribute traffic impact fees that would be applied toward the State Route 4 Bypass project and others. Further discussion of the potential benefits to the community from construction of the State Route 4 Bypass is outside the scope of the EIR. The commenter's support for the Cowell Ranch project and for the SR 4 Bypass is noted, and can be considered by the County as part of the decision on the project.

Greg Freere

- 2.02 See Master Response C(1).

Note that the recommended mitigation program includes a program of local hiring preference.

Sherri Anderson, East County Regional Planning Commission

- 2.03 This comment does not address the adequacy or completeness of the Draft EIR.

Public hearings on the proposed General Plan Amendment will be held before the County Planning Commission who will hold joint hearings with the East County Regional Planning Commission. The County has also requested two representatives from the City of Brentwood to sit with the Commissions. This response is for information only. It does not alter the meaning or conclusions presented in the Draft EIR. However, the County may consider this comment when making a decision on the project. Public hearings will be held after the Final EIR is published.

- 2.04 This comment does not address the adequacy or completeness of the Draft EIR.

Al Courchesne

- 2.05 The commenter states that the Draft EIR does not address project impacts in creating new highways; or its growth-inducing effects, or its impacts on agriculture and on adjacent lands (including 10,000-11,000 acres of Prime Class 1 soil farmland currently designated in the Agricultural Core).

Response. All of the environmental concerns cited in this comment are adequately addressed in the Draft EIR, as follows:

	<u>DEIR page nos.</u>
▪ growth-inducing effects (new highways, other precedent-following new development)	VI--1, 2, 3
▪ effects on adjacent lands	IV.A--20-24, IV.A--46-55
▪ effects on agriculture, including 10,000-to-11,000 acres of adjacent Prime Class 1 soil farmland currently designated Agricultural Core	IV.B--1 through 26, especially pages IV.B--7, 8, 9, 10, 13, 14, 18, 19-22, 25-26

Please also see responses to similar comments 2.30 and 39.08, which repeat the fact that project agricultural, and ag. core impacts are fully and adequately addressed.

- 2.06 The impacts due to the project-proposed closure of Marsh Creek Road would consist primarily of forcing motorists to use Camino Diablo instead of the existing Marsh Creek Road. In the Year 2026 With Project scenario, the amount of bi-directional traffic (i.e., total traffic in both directions) on Camino Diablo west of Walnut Boulevard is 706 vehicles during the PM peak hour. To mitigate this impact, the project applicant would be required to dedicate a 110-foot-wide right-of-way along Camino Diablo between Marsh Creek Road and Walnut Boulevard (see *Mitigation T-3*, Draft EIR page IV.C--62). This would allow for the construction of a four-lane arterial. Also, the intersections of Marsh Creek Road/Walnut Boulevard and Camino Diablo/Byron Highway would be mitigated to accommodate the projected increases in traffic due to the closure of Marsh Creek Road (see *Mitigation T-3*).

Tom Anderson

- 2.07 In response to this comment, the Noise section of the EIR has been revised to address the implications of the Sand Hill Motorcross Park. *Impact N-12* and accompanying *Mitigation N-12* address potential noise impacts from the existing Sand Hill Ranch Motorcross Park (see Draft EIR, page IV.L--34). The discussion notes the possibility that residential development in Planning Areas 58 and 59 (and potentially other nearby planning areas) would be exposed to noise from the motorcross park. This conclusion is based in part on County records of prior complaints from existing residents in the area (see Draft EIR, page IV.L--34). The September 13, 1996 County staff memorandum from Anna Bhat, Current Planning, to Jim Cutler, Advanced Planning alludes to this potential problem, as noted by the commenter.

No significant light/glare impact on the project from the motorcross park is anticipated, given the distance and intervening topography between the closest East Village development area, the location of the motorcross park southwest of the Camino

Diablo/Walnut Boulevard intersection, and the intermittent nature of associated motorcross events. The existing motorcross park generates traffic periodically, and typically not on a weekday during peak hours. Thus, motorcross traffic combined with project-related traffic, would not be expected to contribute to substantial congestion on surrounding roadways.

John Chapman

- 2.08 The first part of this comment is a statement of opinion regarding the proposed project. This portion of the comment does not address the adequacy or completeness of the Draft EIR. The County may consider these statements when making a decision on the proposed project. Public hearings will be held to consider the proposed project after the Final EIR has been published.

The remainder of the comment refers to the basic objectives of the Cowell Ranch project. The goals stated are those of the project; they are not the objectives of the Draft EIR as stated in this comment.

- 2.09 The Draft EIR does not support the comment that the project would result in the loss of 1,127 acres of prime agricultural soils. The Draft EIR states on page IV.B--7 that the project site includes 1,112 acres of Class I or II soils, which are considered prime soils. The Draft EIR states on page IV.B--16 the project would result in the direct loss of approximately 357 acres of prime soils. Anticipated project indirect (precedent-setting) impacts on offsite (surrounding and nearby) prime ag. soils are discussed more qualitatively on Draft EIR pages IV.B--21, 22, 23, 25 and 26.
- 2.10 Impacts AG-1 (Loss of Lands with Prime USDA SCS Ratings) and AG-2 (Cumulative Prime Agricultural Losses) adequately describe project impacts on the local and regional prime soil inventory, stating that the project-related loss of 357 acres of prime soils would represent a significant adverse impact based on applicable CEQA criteria and both county and city general plan policy. The stated impacts would apply to both the countywide and the East County prime soils inventory. The relative impacts of the 357-acre loss in the countywide prime soils inventory, versus the East County inventory, would not affect the EIR impact conclusions; the prime soil loss impact would be significant in either case, and the same mitigations would apply. USDA SCS soil ratings for the Brentwood Planning Area are shown on Draft EIR Figure 22. No official information is known on the prime soils total for the East County subregion. Use of such data, if it did exist, or use of more current data, as suggested in the comment, would not change the Draft EIR impact conclusions and mitigation recommendations regarding prime soils and agricultural impacts, regardless of whether the more current or more localized data indicated a greater or smaller relative project loss.
- 2.11 Potential project impacts on designated Agricultural Core lands and prime farmlands, and the potential nuisance aspects and other incompatibilities associated with the

location of urban uses next to agricultural uses, are adequately discussed on Draft EIR pages IV.B--18 through 26. SR 4 Bypass relationships to the Cowell Ranch project are described on Draft EIR pages III-24 and IV.C--36, 37, 39, 41, 42, and 43. The environmental impacts of the SR 4 Bypass project, including its impacts on the Cowell Ranch segment of the agricultural core, are addressed in the County-certified SR 4 Bypass Project Final EIR, November 1994, available for review at the Contra Costa County Community Development Department.

Regarding project-serving sewer lines and other infrastructure, any sewer, water, power, or communication line extensions from Brentwood would be located within street rights-of-way.

Anticipated project impacts on East Contra Costa County agriculture, and associated mitigation recommendations, are discussed on Draft EIR pages IV.B--1 through 26. The Draft EIR concludes that even with implementation of these recommended mitigations, "the project's effect on onsite prime agricultural lands would represent a significant unavoidable impact" (Draft EIR page IV.B--21), that project effects on cumulative prime agricultural soil losses would represent a significant unavoidable impact (Draft EIR page IV.B--22) and that project precedent-setting impacts on nearby agricultural uses would represent a significant unavoidable impact (page IV.B--6).

Also, note that Response 2.35 suggests additional measures to further reduce the project's impacts on agricultural land, including (1) purchase of development rights, and (2) contribution to an agricultural trust.

- 2.12 See Master Response C, especially items (1), (2) and (8).
- 2.13 See Master Response E, item (1).
- 2.14 Please refer to the responses to Comment 9.06 (regarding timing of roadway improvements) and Comment 36.01 (regarding onsite job and housing development assumptions).
- 2.15 Please refer to the response to Comment 1.17 for a discussion of the number of jobs assumed by the travel demand forecasting model.

The CCTA models contain a special trip generation factor for home-based university trips. The trip distribution patterns and time-of-day percentages are merged with home-based work trips. Given that university (e.g., community college) traffic varies according to class schedules, this assumption is the most reasonable possible.

Please refer to the response to Comment 1.20 for a discussion of the methodology of projecting future year roadway improvements for the future year analysis and the availability of funding for these improvements.

The comment mentions the differences between the East County and Central County travel demand models but does not cite specific differences. While the two models are different, both are consistent with the guidelines for travel demand forecasting models developed by the Contra Costa Transportation Authority (CCTA). Since only a single model was to be used in the analysis, the East County model was the logical choice.

The number of households listed in Draft EIR Table 20 is incorporated into the land use assumptions used in the travel demand forecasting model.

- 2.16 This comment addresses the effects of project-related traffic congestion on the environment and human health, suggesting that these effects are not addressed adequately in the Draft EIR. Section IV.B (Agriculture) of the Draft EIR discusses the effects of project-related traffic on on- and off-site agricultural operations, and notes the potential for increased conflicts between project and agricultural traffic on surrounding public streets (see *Impact AG-3* and *Impact AG-4*). Section IV.G (Biological Resources) notes the potential degradation of San Joaquin kit fox and other wildlife habitat due to project-related traffic (see *Impact BR-8* and *Impact BR-11*). Section IV.K (Air Quality) evaluates the effect of project-related traffic, both during construction and at project buildout, on regional and local air quality conditions (see *Impact AQ-1* and *Impact AQ-2*). Section IV.L (Noise) addresses the impact of roadway traffic noise on project-proposed land uses (see *Impacts N-1* through *N-3*), as well as the impacts of project-generated traffic noise and construction noise (see *Impact N-13* and *Impact N-14*). Sections IV.A (Land Use), IV.F (Public Facilities and Services), and IV.I (Cultural Resources) address the impact of the project-proposed major thoroughfare on the setting of the John Marsh Home State Park (see *Impact LU-7*, *Impact PF-17*, and *Impact CR-4*). In addition, section IV.A (Land Use) addresses the potential for conflict between project residential uses and adjacent major roadways (see *Impact LU-16*). These analyses adequately describe the potential environmental effects of project-related traffic.
- 2.17 The "performance standards" used are those determined by the local government in each location; the City where the roadway segment or intersection lies within a city limit, or Contra Costa County for unincorporated areas of the county. The comment expresses concern that the underlying model assumptions are inaccurate and that therefore any discussion of performance standards based on the output from the model are inaccurate. The commenter is referred to the responses to Comments 2.13 and 2.15, which address issues related to the travel demand forecasting model used in the analysis.
- 2.18 To ensure a comprehensive traffic analysis, the Draft EIR assumes that Travel Demand Management (TDM) measures could have little or no reduction of vehicular traffic. The Draft EIR references a document published by RIDES which states that reductions in traffic from ten to twenty percent can be achieved by TDM measures under the right conditions. Since the exact amount of traffic reduction from TDM

measures is uncertain, the Draft EIR conservatively assumed no reduction in traffic from these measures. *Mitigation T-1* includes recommendations for TDM measures to be incorporated into the project (see Draft EIR, pages IV.C--58 through IV.C--59).

Please refer to the response to Comment 30.13 for a discussion of the provision of transit service to the proposed project. Please also note that *Impact LU-12* indicates that approximately 3,000 (56 percent) of the project housing units (including 693 senior citizen units) would not be located within convenient walking distance (one-quarter mile) of project jobs and services; accompanying *Mitigation LU-12* recommends an internal transit system, redesign of the Golf Course Residential subarea to include a transit and convenience commercial center, and other transit-related measures to address this problem.

- 2.19 The assumption of an increase in traffic from 110,000 to 300,000 monthly vehicle trips noted in the comment is based on a cursory assessment using aggregate growth assumptions. The use of a travel demand forecasting model provides more precise projections.

The travel demand forecast model was performed for the Year 2026 With Project scenario with the portion of Marsh Creek Road closed. Traffic was thus routed to other roadways. The traffic volumes on these roadways, as predicted by this model, are reported in the Draft EIR.

The impacts due to the project-proposed closure of Marsh Creek Road would consist primarily of forcing motorists to use Camino Diablo instead of the existing Marsh Creek Road. In the Year 2026 With Project scenario, the amount of bi-directional traffic (i.e., total traffic in both directions) on Camino Diablo west of Walnut Boulevard is 706 vehicles during the PM peak hour. To mitigate this impact, the project applicant would be required to dedicate a 110-foot-wide right-of-way along Camino Diablo between Marsh Creek Road and Walnut Boulevard (see *Mitigation T-3*, Draft EIR page IV.C--62). This would allow for the construction of a four-lane arterial. Also, the intersections of Marsh Creek Road/Walnut Boulevard and Camino Diablo/Byron Highway would be mitigated to accommodate the projected increases in traffic due to the closure of Marsh Creek Road (see *Mitigation T-3*).

- 2.20 Figure 33 shows the study intersections for the Draft EIR. The intersections of Kirker Pass Road/Buchanan Bypass, Kirker Pass Road/Concord Boulevard, Kirker Pass Road/Clayton Road, and Ygnacio Valley Road/Alberta Way were analyzed in the Draft EIR.

Additional analysis was performed as part of this response to comments for a number of intersections in the Central County area. Traffic volumes for these locations were taken from the Central County model and the project traffic was added appropriately. The results of this analysis are shown in revised Tables 30 and 31 (see section IV,

Revisions to the Draft EIR (Errata)). This analysis does not produce any changes to the Draft EIR's conclusions regarding project and cumulative traffic impacts.

- 2.21 Please refer to Master Response E, item (2), regarding project employment contributions, and Master Response E, item (5), regarding future roadway construction. As shown in Table 4 of the Draft EIR and discussed on pages III--33 through --34, the residential and non-residential portions of the project would be constructed simultaneously.
- 2.22 Alternatives to the proposed project are discussed at pages V--1 through V--46 in the Draft EIR. Six different alternatives were considered in the Draft EIR. While there are many different alternative scenarios that could be considered (such as the one suggested by the comment), the discussion of alternatives need not be exhaustive but is governed by the rule of reason.

EIRs are required to include a reasonable range of alternatives which (1) offer substantial environmental advantages over the proposed project and (2) may be feasibly accomplished in a successful manner considering the economic, environmental, social and technological factors involved. The alternatives need to be able to feasibly attain most of the project objectives and avoid or substantially lessen any of the significant effects of the proposed project. The alternatives in the Draft EIR meet these requirements of CEQA.

The comment suggests that the EIR consider another alternative that would reduce impacts on agricultural resources. The no-project alternative, no general plan amendment alternative and the mitigated alternative, which are already discussed in the Draft EIR, would reduce impacts on agricultural resources. In addition, these alternatives analyzed a more compact development than the proposed project as suggested by the comment. While the suggested alternative in the comment could also reduce impacts on agricultural lands, it would not attain the basic project objectives, especially Principles 2 through 4.

The Mitigation Measures recommended in the Draft EIR will mitigate impacts on agricultural resources to a less-than-significant level. Also note that Response 2.35 suggests additional measures to further reduce the project's impact on agricultural land including (1) the purchase of development rights or (2) contribution to an agricultural trust. The Mitigation Measures and alternatives set forth in the Draft EIR accomplish the same goal as the suggested alternative in this comment.

With respect to the portion of the comment that recommends the County consider approving development on the portion of the site adjacent to Brentwood, and retaining the remainder for agricultural use, the County can consider this comment when making a decision on the project.

- 2.23 The comment questions the apparent reliance of the Draft EIR on "future studies" for determination of the water supply needed to serve the project.

The Master EIR includes as much information as feasibly possible at this planning phase to address the general plan amendment, rezoning, preliminary development plan, development agreement and future development activities consistent with those above applications. As allowed by CEQA, the Master EIR recognizes that there are future activities that cannot be feasibly and completely analyzed at this time (CEQA Guidelines section 5176(c)). Such future activities will be subject to additional environmental review consistent with the Master EIR requirements.

The current Cowell Ranch project includes a preliminary level of detail and the Master EIR focused on the general overview of the project's impacts. Some of the impacts and associated mitigation measures will be addressed in further detail at the time subsequent activities and projects are brought forward. This approach is not considered an inappropriate deferral of environmental review and is permitted with the use of a Master EIR. The Master EIR did not defer all consideration of impacts to a later time; rather it legitimately indicated that more detailed information would be considered at a future time when site specific proposals are brought forward. As recognized by CEQA, the specificity of the Master EIR's discussion of mitigation measures is proportionate to the specificity of the underlying project applications.

CEQA does not preclude the consideration or approval of a project in situations in which the formulation of precise means of mitigating impacts is impractical at the initial project stage. For impacts which mitigation is known to be feasible but where practical considerations prohibit devising mitigation measures early in the planning process (e.g., at the general plan amendment or rezoning stage), a commitment can be made to eventually devise measures that will satisfy specific performance criteria articulated at the time of the initial project approval (e.g., Sacramento Old City Assn. v. City Council (1991) 229 Cal.App.3d 1011). In instances where impacts for which mitigation is not known to be feasible at this time, a more generalized analysis of the impact appears in the Master EIR. In this case, more specific analysis of the environmental effects and the specific mitigation measures will be studied at a later time when more details are known and available on the project. (A Local and Regional Monitory v. City of Los Angeles (1993) 26 Cal.App.4th 630). This approach was followed in analyzing water and sewer impacts.

In direct response to the comments made on the Draft EIR, changes have been made to acknowledge that the mitigation of some of the potentially significant environmental impacts cannot be determined until a future date. As a result, with respect to some of the impacts for which mitigation is not known to be feasible at this time, the mitigation conclusion has been changed to state that consistent with the Master EIR approach, additional information will be required to adequately determine if the impact has been mitigated to an insignificant level. Thus, until further environmental review

substantiates that one mitigation will reduce the impact to a less than significant level as expected, this impact will be listed as significant and unavoidable.

Consistent with the growth management standards contained in the Contra Costa County General Plan (page 4-11), the project applicant will be required to demonstrate that adequate water quantity and water quality can be provided before approval of a subdivision map.

- 2.24 The comment questions the apparent reliance of the Draft EIR on "future studies" for determination of how sewer service will be provided for the project. Please refer to Response to comment 2.23 for an overall explanation of the sewer analysis methodology which is similar to the analysis for water.

The Master EIR includes as much information as feasibly possible with respect to sewer supply. With respect to onsite improvements, the Draft EIR sets forth and analyzes a possible project sewer system on pages IV.F--35 through F--38. At this preliminary planning stage, CEQA does not require that a specific sewer source and treatment be identified. The Draft EIR described the various sewer treatment and disposable alternatives currently under consideration by the City of Brentwood. The Draft EIR (page IV.F--40) recognizes that the secondary impacts resulting from sewer improvements will be evaluated as part of future project specific applications. The Draft EIR concluded that if various options are selected with respect to sewer supply, sewer impacts would be mitigated to a level of less than significant. At this particular time, a determination cannot be made that the project will have a less than significant impact on sewer since the actual wastewater facilities to be used are not known at this time. That determination will be made when more information is available at a subsequent and more detailed project application stage. As a result, the conclusions in *Mitigation PF-5* and *PF-6* have been changed to state that consistent with the Master EIR approach, additional information will need to be considered at the time site specific proposals are brought forward to make a determination on the mitigation of this impact. Thus, until further environmental review substantiates that one mitigation will reduce the impact to a less than significant level as expected, this impact will be listed as significant and unavoidable.

Consistent with the growth management standards contained in the County General Plan (page 4-11), the project applicant will be required to demonstrate that adequate sanitary sewer quantity and quality can be provided before approval of a subdivision.

- 2.24a This is a statement of opinion regarding the proposed project. The comment does not address the adequacy or completeness of the Draft EIR. The County may consider these statements when making a decision on the proposed project. Public hearings will be held to consider the proposed project after the Final EIR has been published.

Denise Hollabaugh-Thom

- 2.25 The comment notes that the EIR identifies the loss of open space as significant, but suggests that insufficient attention is given to this loss, and cites in particular the aesthetic effect of lost open space surrounding Brentwood on the overall image of the community.

The Draft EIR includes an adequate description of project open space impacts and mitigation needs on pages IV.A--32-33 and 45, associated agricultural impacts on pages IV.B--18 through 26, associated impacts on the rural character of Brentwood on pages IV.A--44 and 45, and the specific aesthetic impact of project-related open space conversion on the image of the Brentwood community on pages IV.J--19 through 37.

- 2.26 The commenter is citing information contained in the Draft EIR. The comment does not address the adequacy or the completeness of the document. Therefore, no further response is necessary.
- 2.27 This is a statement of opinion regarding the proposed project. The comment does not address the adequacy or the completeness of the Draft EIR. The County may consider these statements when making a decision on the proposed project. Public hearings will be held to consider the proposed project after the Final EIR has been published.

Edith Tidrick

- 2.28 The comment references "the highway" and attendant noise. The highway is likely the State Route 4 Bypass which is a separate project to be constructed independent of the Cowell Ranch proposal. The impacts associated with the construction and use of the State Route 4 Bypass were evaluated as part of the environmental review prepared for that project. The certified Final EIR for the State Route 4 Bypass Project is available for review at the Contra Costa County Community Development Department.

Noise impacts from the proposed project are addressed in Section IV.L, Noise, page IV.L--1 of the Draft EIR.

- 2.29 Figure 9 of the Draft EIR shows that the project would not include conversion of Orchard Lane to a cul-de-sac. As a mitigation measure to reduce the amount of traffic on Concord Avenue, the Draft EIR does recommend creating a cul-de-sac on Concord Avenue to the east of the State Route 4 Bypass (see *Mitigation T-4*). This is recommended to reduce traffic on Concord Avenue, which is part of the County-designated Agricultural Core.

Tom Mooers, Greenbelt Alliance

- 2.30 The Draft EIR includes a full discussion of project impacts on nearby agricultural resources. See Draft EIR pages IV.B--1, IV.B--7 through 11, Figures 23, 24 and 25, and pages IV.B--21 through 26. Other issues raised by this comment (i.e., traffic congestion, jobs/housing imbalance, impacts on local housing market and schools) are addressed in the responses to Comments 2.31 through 2.34 that follow. Loss of wildlife habitat is extensively addressed in section IV.G (Biological Resources) of the Draft EIR.
- 2.31 Please refer to Master Response E, item (4).
- 2.32 The Draft EIR does not double count jobs from Antioch FUA #2 or any other areas in its housing-jobs balance analysis. The principal focus of the analysis is on the relationship between jobs and housing directly created by the project. Table 21 of the Draft EIR shows the summary of the employment estimates that were used in the travel demand forecasting model.

As part of the forecasting process undertaken for EIR traffic analyses, Contra Costa County Community Development Department staff considered regional land use forecasts, General Plans, and development proposals to establish base line estimates of employment, population and housing. The county staff process of estimating future land use changes included consideration of areas designated for new development throughout the entire East County area, including the City of Antioch.

Thus, the number of jobs projected for Antioch and for the Cowell Ranch project (see Table 21) are not double-counted.

- 2.33 The comment raises an economic rather than an environmental impact issue. Such economic questions and issues may warrant consideration in the county's deliberations on this project, but under CEQA cannot be treated as a significant environmental impact unless there is a chain of cause and effect from the anticipated economic effects to an adverse physical (environmental) change (CEQA Guidelines Section 15131). No evidence has been identified that such a cause and effect would occur due to project relationships to the future housing market.
- 2.34 Pages IV.F--78 through F--87 of the Draft EIR discusses the impacts on the local school districts, where the project generated students would attend school, and the mitigation measures necessary to ensure that project impacts are reduced to a level of less than significance.

Laurie Schuyler

- 2.35 The commenter suggests requiring the purchase of development rights as mitigation for project-related agricultural losses. Loss of prime agricultural land cannot be

adequately mitigated by purchase of development rights for prime soil land for permanent protection somewhere else; there would still be a net loss of prime soils with such a measure to fully mitigate this impact. Prime soils cannot be feasibly created. The only effective measure would be to redesign the project to avoid areas of prime agricultural land, as recommended under Mitigation AG-1 on Draft EIR page IV.B--21. If this measure is not feasible, then this impact would be significant and unavoidable. However, project contribution to an agricultural trust, as suggested in this comment, could help to indirectly offset the project impacts (but not to less than significant levels). In response to this comment, the possibility of a project contribution to an agricultural land trust, as well as the possibility of project participation in a development rights transfer, have been added to Mitigation AG-1 (see errata herein for Draft EIR page IV.B--21).

Barbara Bonnickson

2.36 Project layout characteristics are illustrated on the following Draft EIR exhibits:

- Figure 6: Proposed General Plan Amendment
- Figure 7: Existing and Proposed Urban Limit Line
- Figure 8: Proposed Development Plan
- Figure 9: Proposed Project Circulation and Subregional Connectivity
- Figure 10: Proposed Arterial Streetscapes
- Figure 11: Proposed Collector Streetscapes
- Figure 12: Proposed Local Streetscapes

2.37 The comment questions whether or not would it be wise for the City of Brentwood to devote such a substantial share of its water and sewer resources to the Cowell Ranch project, and whether there will be sufficient water and sewer for future projects.

At the present time the City relies on a series of wells for its domestic water needs. In anticipation of future growth, the City has undertaken the expansion of its wells together with a long term plan to secure additional raw water. The plan is to purchase 21,000 acre feet of raw water in three blocks of 7,000 acre feet each. The Interim Water Supply Study, dated April 1995, has been adopted by the City and provides the mechanism for the first 7,000-acre-feet block (i.e., Block A).

The raw water is available from East Contra Costa Irrigation District (ECCID) through options that were purchased by Contra Costa Water District (CCWD) in 1991. through negotiation with CCWD and ECCID, the City has acquired the option on the Block A ECCID excess water. The City has made two annual option payments and will continue to make these payments through 2009, at which time the transfer of Block A will be complete.

Negotiations are underway between the City, CCWD and ECCID to secure future Block B and C options to provide the City with water it requires through ultimate buildout. In addition to the long-term efforts underway by the City, Cowell has

purchased sufficient raw water from the Byron Bethany Irrigation District to service the project.

It is not possible or appropriate for this EIR to speculate on the likelihood of other future development plans, their associated water and sewer needs, or the position that should be taken by the City of Brentwood in regard to supplying services. These are issues for the City of Brentwood to consider as part of the City's own long-range planning.

- 2.38 The purpose of this EIR is to evaluate the project's impacts on the environment, including whether schools would have sufficient capacity. This information has been provided under Impact PF-20 on page IV.F--84. This EIR does not evaluate the school needs of other projects which have yet to be developed, except for their contribution to cumulative facility needs. That analysis would be included as part of the review of other projects and/or as part of the Brentwood Union School District's ongoing facility planning.

D. RESPONSES TO WRITTEN COMMENTS

Eighty-three letters and memoranda were received during the Draft EIR public review period. The following section presents the written responses of the EIR preparers to substantive comments in these letters and memoranda pertaining to the adequacy of the Draft EIR. The 83 letters and memos are presented in Final EIR Volume 1. Comments and responses are correlated by code numbers added to the margins of each letter.

**3. Annamaria Perrella, Executive Officer, Contra Costa County Local Agency
Formation Commission, October 24, 1996**

- 3.01 Page I--1 of the EIR has been revised to incorporate these clarifications and corrections (see section IV herein; page I--1 errata). This additional (or updated) text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.
- 3.02 The comment regarding the completeness of the Draft EIR is acknowledged.

4. Ray Waletzko, Administrative Analyst, Contra Costa Mosquito and Vector Control District; November 4, 1996

- 4.01 The District comments that an increase in population would increase the number of people exposed to mosquitos, citing a concern for public health since the encephalitis virus is transmitted by a mosquito.

There is no evidence to suggest, and the commenter has not provided such evidence, that the proposed project (and the resulting population increase in the particular area of the County) would result in a significant adverse public health impact based on an increased risk of encephalitis. Even if the commenter could provide evidence of a link between increased population in the local area and the incidence of encephalitis, the current rate of contraction as listed in the commenter's letter is so low that the increase in the rate based on the new population would be extremely remote.

- 4.02 The commenter states that construction may increase mosquito breeding frequency and suggests design measures to reduce mosquito breeding. The commenter has not provided any evidence that the increase in mosquito breeding will result in a significant adverse environmental impact. It should be noted that some of the measures identified by the commenter interfere with the creation of onsite wetlands, as identified in *Mitigation BR-4* of the Draft EIR. Although the County cannot find that there is a significant environmental impact, the County may consider the recommendations regarding design and District monitoring as part of the decision of the project.
- 4.03 The impact of the project on the need for mosquito abatement service would not constitute a significant environmental impact and is therefore not analyzed in the EIR. The comment raises an economic rather than an environmental impact issue. Such economic questions and issues may warrant consideration in the County's deliberations on this project, but under CEQA cannot be treated as a significant environmental impact unless there is a chain of cause and effect from the anticipated economic effects to an adverse physical (environmental) change (CEQA Guidelines Section 15131).
- 4.04 The commenter has not provided evidence of the adverse environmental impact associated with an increase of mosquitos and wetland areas, and the EIR authors have no knowledge of such evidence. As such additional mitigation is not necessary. Also, see Response 4.02.

5. Henry Finch, Project Engineer, Flood Control, Contra Costa County Public Works Department; November 7, 1996

- 5.01 The comment asks for wording changes in *Mitigation SG-14* to clarify that the responsibility for any required stability analysis of the Marsh Creek Reservoir dam is the responsibility of the applicant, not the Flood Control District or the Department of Water Resources.

The concern raised by the comment is noted. As worded, *Mitigation SG-4* may be used as a condition of project approval, requiring the applicant to perform a stability analysis of the reservoir and carry out mitigation measures. The Contra Costa County Board of Supervisors will assign responsibility for implementation of mitigation measures; a note has been added in section II (Summary) of the EIR to clarify this point.

- 5.02 The comment asks that references to the County as the reviewing agency for flood control facilities be changed to the Contra Costa County Flood Control and Water Conservation District. Comment acknowledged. All references to the "County" as the reviewing/approving agency in *Mitigation D-2* through *D-6* have been changed to the "Contra Costa County Flood Control and Water Conservation District." (See section IV, Revisions to the Draft EIR (Errata).) This change also applies in references to establishment and administration of drainage fees, which is the responsibility of the Flood Control District.

6. David Moyal, 4214 Walnut Boulevard, Walnut Creek; November 7, 1996

- 6.01 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Open space	IV.A.4	Yes
Agriculture	IV.B.4	Yes
Transportation	IV.C.4	Yes
Job Development	IV.A.4	Yes

7. Rev. Ronald G. Schmit, Pastor, St. Anne's Catholic Church, Byron; November 7, 1996

- 7.01 The proposed project is projected to have a significant impact on Camino Diablo east of Vasco Road. *Mitigation T-1* (Draft EIR, page IV.C--56) recommends that the portion of Camino Diablo between Vasco Road and the Byron Highway be widened to four lanes, which would reduce the project's impact on Camino Diablo to a less-than-significant level.

The Draft EIR analyzes those areas where traffic is projected to operate at an unacceptable level of service and identifies the roadway improvements necessary to provide an acceptable level of service. The project would be required to provide a fair share funding of any recommended roadway improvements.

- 7.02 This is a statement of opinion regarding the proposed project. The comment does not address the adequacy or the completeness of the Draft EIR. The County may consider these statements when making a decision on the proposed project. Public hearings will be held to consider the proposed project after the Final EIR has been published.

8. Michael Palucki, 2586 Chinook Drive, Walnut Creek; November 10, 1996

- 8.01 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Land use	IV.A.4	Yes
Agriculture	IV.B.4	Yes
Transportation (traffic conditions)	IV.C.4	Yes

9. Laurie Schuyler, 2850 Loma Vista Avenue, Concord; November 10, 1996

- 9.01 See Master Response C, item (1), and Master Response E, item (2).

Economic conditions will ultimately define actual employment levels on the project site and in the East County area. *Mitigation T-1* of the Draft EIR calls for use of performance standards to ensure adequate roadway improvements and an adequate balance between onsite jobs and housing units.

- 9.02 Figures 36 and 37 of the Draft EIR show the projected traffic volumes for the Years 2010 and 2026, respectively, for all of the roadways mentioned in the comment with the exception of Kirker Pass Road and Ygnacio Valley Boulevard. Under the Without Project scenarios, the bi-directional traffic (i.e., total traffic in both directions) on Kirker Pass Road, east of Clayton Road, is projected to increase from 3,181 to 3,319 vehicles during the PM peak hour between the Years 2010 and 2026. Ygnacio Valley Road, to the west of Alberta Way, is projected to increase from 6,201 to 6,406 vehicles during the same time period. The volumes were considered in the Draft EIR traffic impact analysis.

- 9.03 The study intersections that would exceed performance standards are listed in Tables 28 and 29 of the Draft EIR for the Years 2010 and 2026 scenarios, respectively. Other intersections were assumed to be located such that the project would not contribute a significant number of trips to the intersection. A screening analysis performed with the travel demand forecasting model determined which intersections would receive 50 or more peak hour vehicle trips. "Study" intersections were then selected in coordination with Contra Costa County staff. Please refer to the footnote at the bottom of page IV.C-8 of the Draft EIR for more detail on the intersection selection process.

- 9.04 See Master Response C, items (1), (7), (8) and (9).

- 9.05 Table 21 of the Draft EIR shows the summary of the employment estimates that were used in the travel demand forecasting model.

As part of the forecasting process undertaken for EIR traffic analyses, Contra Costa County Community Development Department staff considered regional land use forecasts, General Plans, and development proposals to establish base line estimates of employment, population and housing. The county staff process of estimating future land use changes included consideration of areas designated for new development throughout the entire East County area, including the City of Antioch.

Thus, the number of jobs projected for Antioch and for the Cowell Ranch project (see Table 21) are not double-counted.

The land use assumptions for the Cowell Ranch project were considered separately from those of Antioch. In other words, neither jobs nor residences were displaced from Antioch's FUA#1 or FUA#2 to account for new jobs or residences in the Cowell Ranch project. The project was assumed to occur in addition to the already approved development in Antioch and the rest of eastern Contra Costa County.

Standard traffic engineering practice in performing traffic impact analysis is to assume that all approved projects will be constructed. This is typically the most conservative approach yielding the largest amount of traffic on the study network. For this reason, all of the approved development within FUA#1 and FUA#2 was included in the land use assumptions for the year 2010 analysis.

9.06 Many of the transportation improvements assumed in the Year 2010 analysis have a known source of funding and are expected to occur in the near future. There are numerous residential developments expected to occur in the East County area that will contribute funds to the roadway improvements assumed in the analysis or will construct improvements as a condition of development approval. Thus, the onsite job projections for the project appear to be reasonable. However, *Mitigation T-1* calls for use of performance standards to ensure adequate roadway improvements and an adequate balance between onsite jobs and housing units (see response to Comment 1.20).

9.07 A complete listing of the projected costs, current funding sources, and anticipated shortfalls for each of the roadway improvements assumed in the analysis is not available.

Mitigation T-1 states that, as a condition of approval, each individual future development on the project site would need to demonstrate to the satisfaction of the County that measures would be taken to ensure that every roadway component analyzed in the Draft EIR would attain the applicable roadway system performance standard. This measure would reduce project traffic impacts to less-than-significant levels on all roadways analyzed, with two exceptions: State Route 4 between Railroad Avenue and the State Route 4 Bypass, and Vasco Road. *Mitigation T-1* includes requirements for project contribution of its "fair share" of the cost for funding the necessary roadway improvements to maintain these performance standards.

9.08 Please refer to the response to Comment 1.18 for a discussion of the analysis of Kirker Pass Road, Ygnacio Valley Road and other Central County locations. As noted in that response, the intersections of Kirker Pass Road/Buchanan Bypass, Kirker Pass Road/Concord Boulevard, Kirker Pass Road/Clayton Road, and Ygnacio Valley Road/Alberta Way were analyzed in the Draft EIR.

9.09 Currently, the section of Briones Valley Road between Deer Valley Road and Concord Avenue is an unpaved and gated roadway segment that has been abandoned by the County. The cumulative development that this mitigation measure addresses dictates

that Briones Valley Road be realigned west of the project to Deer Valley Road near Balfour Road, away from Marsh Creek Road.

- 9.10 The closure of Marsh Creek Road was considered in the Year 2026 analysis. Thus, the appropriate impacts of this road closure on Vasco Road and State Route 4 were considered.

The impacts due to the project-proposed closure of Marsh Creek Road would consist primarily of forcing motorists to use Camino Diablo instead of the existing Marsh Creek Road. In the Year 2026 With Project scenario, the amount of bi-directional traffic (i.e., total traffic in both directions) on Camino Diablo west of Walnut Boulevard is 706 vehicles during the PM peak hour. To mitigate this impact, the project applicant would be required to dedicate a 110-foot-wide right-of-way along Camino Diablo between Marsh Creek Road and Walnut Boulevard (see *Mitigation T-3*, Draft EIR page IV.C--62). This would allow for the construction of a four-lane arterial. Also, the intersections of Marsh Creek Road/Walnut Boulevard and Camino Diablo/Byron Highway would be mitigated to accommodate the projected increases in traffic due to the closure of Marsh Creek Road (see *Mitigation T-3*).

- 9.11 Table 21 of the Draft EIR shows the employment estimates developed by the Contra Costa Transportation Authority (CCTA). These show a total increase of over 46,000 jobs in the East County area from 1990 to 2005. The City of Brentwood alone shows an increase of over 13,000 jobs in the same period. Thus, it is not unreasonable to assume a large increase in employment in the East County area. Also see Master Response C, items (7) and (8). The travel demand model used in the analysis assumed land uses that included the number of jobs projected for the Cowell Ranch project. Economic conditions will ultimately define actual employment levels on the project site and in the East County area. *Mitigation T-1* of the Draft EIR calls for use of performance standards to ensure adequate roadway improvements and an adequate balance between onsite jobs and housing units (see response to Comment 1.20).

- 9.12 The traffic analysis assumes that onsite project jobs would represent new employment, rather than relocation of jobs from other areas such as San Francisco and Oakland. For traffic analysis purposes, this represents a "worst case" assumption, since it provides for an overall increase in traffic, rather than a diversion of traffic from other areas. Thus, for purposes of this EIR, the project is assumed to have no effect on existing job levels in Oakland and San Francisco. Assumptions regarding percentages of projected jobs that would be attracted away from these areas to the project would be speculative at this stage, particularly since the Association of Bay Area Governments (ABAG) projects significant job growth in Oakland, San Francisco, and throughout the region through the year 2020 (see ABAG's Projections 98, December 1997, page 51, which forecasts a 45-percent increase in jobs (from 3,028,290 to 4,397,940 jobs) in the Bay Area between 1995 and 2020).

- 9.13 Please refer to the response to Comment 1.20 for a discussion of the methodology of projecting future year roadway improvements for the future year analysis and the availability of funding for these improvements.

Please refer to the response to Comment 9.07 for discussion of applicant responsibilities for roadway improvements and jobs/housing balance conditions.

- 9.14 The methodology for calculation of the project's fair share will be determined in cooperation with the County. The following general guidelines would be followed to determine whether fair share funding is applicable:

1. If the project would move traffic congestion to unacceptable levels, the project alone would be required to fund the improvements necessary to ensure that traffic conditions return to the accepted standard.

2. If traffic levels exceed standards without the project, and the project would simply exacerbate the existing impact, the project would be responsible for mitigating only the project's fair share. Under future scenarios, if traffic levels will exceed standards in the future without the project and the project would only exacerbate the impact, the project would be responsible only for fair share mitigation. In all cases, the payment of fair-share fees must be linked to actual improvements in order to be considered adequate mitigation.

Fair share funding is usually calculated by first identifying the total amount of additional traffic that would use a given roadway over a specified number of years. The fair share proportion for any given project consists of the proportion of trips from the proposed project divided by the total number of additional trips that are expected to occur. Existing traffic at a location does not provide any funding in such an arrangement, other than general tax dollars specified for roadway maintenance and improvements.

The transportation improvements specifically required for the project would be funded by the project applicant. Traffic impact analysis for any specific development application would determine whether a roadway component is projected to operate at an unacceptable level of service for both the project and no project scenarios; and whether transportation improvements, such as signalization of a non-signalized intersection, would be warranted with and without the project (see *Mitigation T-1* in the Draft EIR). This approach was used in the Draft EIR traffic analysis.

- 9.15 There are numerous sources of funding that will be used in the construction of roadway improvements for eastern Contra Costa County. While local sources will provide much of this funding, state and federal sources will be available as well. It is not known when specific funding sources will be available for all of the assumed roadway improvement projects. At the time that the County reviews specific development applications for the project site, the exact transportation mitigation

measures required of the applicant, as well as the projected funding for these improvements, will be identified (see Draft EIR *Mitigation T-1*). If an adequate source of funding is not available for an assumed improvement, the impact would be considered a significant impact that would have to be addressed by the project applicant through the measures identified in *Mitigation T-1* (e.g., fair share funding, travel demand management).

- 9.16 The applicant would be required to file a routine mitigation monitoring report to assure compliance with the performance-based transportation mitigation measures described in *Mitigation T-1* as project phases are approved and constructed. Please refer to *Mitigation LU-11* in section IV.A, Land Use, of the Draft EIR for a complete description of this mitigation measure. Also, see Master Response C, item 1.
- 9.17 The East Contra Costa Regional Fee applies to future residential and non-residential developments in all of East Contra Costa County. However, the impact fee rate for residential development is substantially higher than the rate for non-residential development. The impact fees on residential and non-residential development are more equivalent for local infrastructure. It would be necessary for the development of the project to balance the phasing of the jobs and housing components. The environmental analysis does not assume jobs will precede housing completions. *Mitigation LU-11* calls for an *Employment Development Program* that would monitor the ongoing development of the project to establish a phasing schedule that adequately provides for the job component in relation to the provision of infrastructure improvements necessary to service business park, commercial and office uses. Please refer also to the response to Comment 9.06.
- 9.18 Not all roadway segments constructed with traffic impact fees will operate at capacity once they are completed. Roadway segments that are projected to operate at Level of Service F will operate at capacity during the peak hour. These roadway segments are listed in Tables 26 and 27 of the Draft EIR. The impacts of the projects on these roadway segments are clearly listed in the Draft EIR.

Please refer to the response to Comment 1.17 for a discussion of job projections.

- 9.19 There is no known standard dollar amount that would render an individual mitigation measure "infeasible." As noted in *Mitigation T-1*, the project applicant would be responsible for paying a fair share amount for roadway improvements.
- 9.20 The widening of State Route 4 is listed as a projected transportation improvement in the Countywide Transportation Plan. The mitigation measure referred to in the comment is part of *Mitigation T-1* of the Draft EIR. This mitigation measure provides that each future development application would be required to demonstrate to the County that adequate measures have been taken to ensure compliance with the applicable roadway performance standard. The mitigation also states that the County would condition approval of any project on the applicant's proportionate contribution

to roadway improvements such as the widening of State Route 4. County decision-makers would be charged with implementing this mitigation. Please note that the *Employment Development Plan* component of *Mitigation T-1* is linked to *Mitigation LU-11*, which would establish building permit quotas based on jobs-per-employed resident targets (see Draft EIR, page IV.A--61).

- 9.21 One of the purposes of the travel demand forecasting model is to determine the routing of vehicles based on congestion levels on roadways. The traffic volumes predicted by the model considers the travel time given the expected congestion on each possible path in the roadway network and assigns vehicles accordingly. In the traffic model, Byron Highway provides the only alternate route to Vasco Road between eastern Contra Costa County and northern Alameda County. Marsh Creek Road provides the only alternate route between eastern and central Contra Costa County. The traffic volumes presented in Figures 36 and 37 of the Draft EIR do consider the use of these potential alternate routes due to congestion of State Route 4 and Vasco Road. *Impact T-1* and associated *Mitigation T-1* address resulting traffic congestion problems.
- 9.22 The estimated cost of the roadway improvement mentioned in the comment (the State Route 4 Bypass widening) has not yet been defined. As stated in the Draft EIR (*Mitigation T-1*), the project applicant would be required to pay its fair share of any roadway improvements at locations where the project has a significant cumulative impact as defined by the standards of significance. The project applicant would be required to pay the full cost for any project-only impacts as defined by the "standards of significance." Both circumstances are indicated in the first column of Tables 32 and 33 of the Draft EIR. In accordance with *Mitigation T-1*, a future development proposal could only be approved if funding is available for necessary improvements at the time of a specific development application.
- 9.23 The estimated cost of the improvement mentioned in the comment has not yet been defined. The proportion of this improvement to be funded by the proposed project would be determined at the time of a specific development application for the project site.
- 9.24 Please refer to the response to Comment 9.22.
- 9.25 The estimated cost of the improvement mentioned in the comment has not yet been defined. The proportion of this improvement to be funded by the proposed project would be determined at the time of a specific development application for the project site. The time frame required for completion of this improvement is not known.
- 9.26 The estimated cost of the improvement mentioned in the comment has not yet been defined. The proportion of this improvement to be funded by the proposed project would be determined at the time of a specific development application for the project site. The time frame required for completion of this improvement is not known.

- 9.27 Analysis of a scenario in which no widening of State Route 4 was assumed was not performed as part of the Draft EIR traffic analysis. Please refer to the response to Comment 1.20 for a discussion of future roadway improvement assumptions and available funding sources. As noted in that response, the assumptions used in the Draft EIR were developed in collaboration with the Contra Costa County Community Development Department and are generally consistent with the Metropolitan Transportation Commission's Regional Transportation Plan (RTP) and the East Contra Costa Transportation Strategic Plan. These documents constitute the best estimate of what transportation improvements can be reasonably expected by the years 2010 and 2026.

10. Jerald A. Britten, 3720 Holmes Road, Oakley; November 14, 1996

- 10.01 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Land use	IV.A.4	Yes
Agriculture	IV.B.4	Yes
Traffic	IV.C.4	Yes
Water quality	IV.E.4	Yes

11. Ronald West, 1250 Elmwood Drive, Walnut Creek; November 14, 1996

- 11.01 See Master Response C, item (1). The comment states that there is a 1,221 imbalance between the number of employed residents and the number of jobs. This imbalance by itself is not a significant environmental impact (i.e., does not directly change a physical condition). To the extent the imbalance contributes to traffic and air quality impacts, these impacts have been fully analyzed in the Draft EIR on pages IV.A--39-41, IV.A--57-62, and IV.C--53 and 59.

The County's General Plan policies address a jobs/housing balance as distinguished from a jobs/employed resident balance. At buildout, the project would provide an estimated 6,628 jobs and 5,010 units for a jobs/housing balance ratio of 1.32. (Note: Since the draft EIR was published, the project applicant has reduced the number of units from 5,226 to 5,000; see Comment 84.01.) Mitigation Measure LU-11 will help address the concerns expressed.

- 11.02 See Master Response C, item (3).

- 11.03 Year 2026 land use projections were developed in close consultation with County staff. The East County Traffic Model assumptions for future years were updated to reflect the latest information regarding development potentials in various county opportunity areas (e.g., Discovery Bay, Cypress Corridor, Pittsburg, Antioch, Clayton, Central County). The data also reflected projections by the EIR economics consultant, Recht Hausrath & Associates, of intraregional jobs/housing growth relationships for 2026, based on data from the Association of Bay Area Governments (ABAG), the State Department of Finance, and other sources.

The development of 2026 growth scenarios for East County communities was based generally on General Plan buildout projections. For the cities of Brentwood and Pittsburg, the horizon year for each city's General Plan was 2010. This horizon year assumes the full buildout of each city. Thus, no further growth was assumed between the years 2010 and 2026. Since the household and job estimates in ABAG's Projections 96 are also based in part on local government land use policies such as general plans, any differences between the ABAG projections and those cited in the Draft EIR are due to other differences in forecasting methodology. Such differences in long-range projections are not uncommon. Please refer also to the response to Comment 47.13.

- 11.04 Tables 30 and 31 of the Draft EIR show that there is a projected decrease in traffic for some of the "out-of-area" intersections between the years 2010 and 2026. This is not surprising considering that the Year 2026 scenarios assume significant widening of State Route 4 as compared to the Year 2010 scenarios. The improved travel speed on State Route 4 would reduce the likelihood of drivers using Kirker Pass Road as an alternative route to the same extent that is observed in the Year 2010 scenarios.

- 11.05 This is a statement of opinion regarding the proposed project. The comment does not address the adequacy or the completeness of the Draft EIR. The County may consider these statements when making a decision on the proposed project. Public hearings will be held to consider the proposed project after the Final EIR has been published.

12. Mildred Schneldman, 2320 Ptarmigan Drive #2, Walnut Creek; November 15, 1996

- 12.01 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Land use	IV.A.4	Yes
Air quality	IV.K.4	Yes

13. Joyce K. Laird, 860 Sibert Court, Lafayette; November 18, 1996

- 13.01 Comment noted. This EIR identifies potential project impacts on natural resources, including agricultural resources, vegetation and wildlife, soils, drainageways, mineral resources, visual quality, and energy resources. The County Planning Commission and the Board of Supervisors must consider the environmental analysis presented in the Final EIR prior to making a decision on the project.

**14. Margaret J. Tracy, President, Board of Directors, Preserve Area Ridgeland
Committee (PARC); November 18, 1996**

- 14.01 This comment states the commenter's opposition to the project, and does not raise issues regarding the EIR. The Draft EIR cites these particular ABAG goals (1 and 2 attached to this comment letter) on page IV.A--29, but does not apply them as significance criteria because ABAG goals do not constitute adopted policies of an agency "with jurisdiction over the project" (see Draft EIR page IV.A--31; and errata herein for page IV.A--29). ABAG is not a regulatory agency and has no jurisdiction over the project (see errata herein for EIR page IV.A--29). The County may consider this statement when making decisions on the project.
- 14.02 Comment expresses support for Greenbelt Alliance and ABAG goals. No comments on Draft EIR adequacy.

15. James A. Erickson, 312 Grovewood Loop, Brentwood; November 19, 1996

- 15.01 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Land use	IV.A.4	Yes
Agriculture	IV.B.4	Yes
Traffic	IV.C.4	Yes
Air quality	IV.K.4	Yes
Wildlife conditions	IV.G.4	Yes

16. Leigh Jordan, Coordinator, Historical Resources Information Center, Northwest Information Center; November 21, 1996

- 16.01 The comment that the Northwest Information Center has no comments on the Draft EIR is acknowledged.

17. Adolph Martinelli, Director, Community Development Agency, Alameda County Planning Department; November 27, 1996

- 17.01 Assumptions concerning the number of Cowell Ranch residents who will also be Cowell Ranch employees are built into the travel demand forecasting analysis. Trip distribution is computed by the travel demand forecasting model and is not an input to the modeling process. This conforms with accepted travel demand forecasting methodologies. Please refer to Master Response E, item 1, and to Appendix C of the EIR for more details on the travel demand forecasting model and the process of estimating trip distribution. Also, refer to Master Response A.
- 17.02 In the development of the original East County model, DKS Associates incorporated year 1990, 2000 and 2010 household and employment data for Alameda County (and other counties in the nine-county Bay Area besides Contra Costa County) directly from ABAG's Projections 90.

For the trips that are external to the nine-county Bay Area, a standardized procedure was followed. This procedure has been in place since development and acceptance of the East County model. The approach to the assignment of external traffic from San Joaquin County follows detailed logic. First, year 1990 distributions of travel on I-580 across the Altamont Pass were estimated based on MTC's license plate survey in 1987. Secondly, year 1990 estimates of travel across the San Joaquin County line on State Route 4 were developed based on a gravity model procedure developed by DKS for the Delta Expressway EIR study. Similar procedures were used for other minor gateways, such as the Byron Highway. Finally, estimates of future year traffic were extrapolated upwards from the 1990 estimates. If any gateway reached capacity, that gateway's traffic was then held constant at that capacity level. Such a projection addresses concerns about the Mountain House project and other growth assumptions.

The Draft EIR identifies the North Livermore and Mountain House projects as "anticipated new development" (see Table 9 in section IV.A, Land Use), and evaluates the cumulative land use and other impacts associated with this development. In addition, the Draft EIR evaluates the North Livermore area as a potential alternative site for the Cowell Ranch project (see section V, Alternatives to the Proposed Project). The Mountain House project site was considered as an alternatives site but dismissed for reasons explained in the Draft EIR (page V--37).

18. Mary Ann Holsington, 959 Hawthorn Drive, Lafayette; November 29, 1996

- 18.01 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Agricultural conditions in the County	IV.B.4	Yes

19. Gregory Gartrell, Director of Planning, Contra Costa Water District; December 2, 1996

- 19.01 Comment acknowledged. Figure 16 has been revised to show a smaller water surface area, as suggested by the comment and as shown on maps obtained from CCWD staff. As noted in the Figure 16 legend, the figure shows the Los Vaqueros watershed boundary, rather than the current extent of public ownership.

The reservoir boundary shown on Figure 16 was intended to reflect the general location of development and open space areas in the subregion. The precise accuracy of the boundary depiction at this map scale does not have any relationship to the analysis of environmental impacts presented in the Draft EIR. The information provided by this comment has been used to update this EIR, and a revised Figure 16 is provided in the Errata section.

- 19.02 Comment acknowledged. The comment suggests two wording changes in the discussion of CCWD water supplies at the bottom of page IV.F--2 of the Draft EIR. The suggested changes have been made. (See section IV, Revisions to the Draft EIR (Errata).) This updated text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.

- 19.03 Comment acknowledged. Figure 49 has been revised to show the current CCWD service area boundary for untreated water, as suggested by the comment and as shown on maps obtained from CCWD staff. The service area boundary for treated water shown on the original Figure 49 is correct, according to CCWD staff.

The information shown on Figure 49 was intended to reflect general water service areas. The precise accuracy of the service area depictions at this map scale does not have any relationship to the analysis of environmental impacts presented in the Draft EIR. The information provided by this comment has been used to update this EIR, and a revised Figure 49 is provided in the Errata section.

- 19.04 Comment acknowledged. This comment suggests wording changes to the second paragraph on page IV.F--4 of the Draft EIR. The paragraph in question has been revised as suggested. (See section IV, Revisions to the Draft EIR (Errata).) This updated text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.

- 19.05 Comment acknowledged. This comment suggests wording changes to the second paragraph on page IV.F--4 of the Draft EIR. The paragraph in question has been revised as suggested. (See section IV, Revisions to the Draft EIR (Errata).) This updated text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.

- 19.06 Comment acknowledged. This comment suggests wording changes to the second paragraph on page IV.F--4 of the Draft EIR. The paragraph in question has been revised as suggested. (See section IV, Revisions to the Draft EIR (Errata).) This updated text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.
- 19.07 Comment acknowledged. The comment asks for further clarification and updated discussion of the status and on-going negotiations concerning the water purchase agreements of CCWD and the City of Brentwood.

The following text has been added to page IV.F--11 of the Draft EIR to update the discussion of the water supply status for the City of Brentwood as it related to the project. (See section IV, Revisions to the Draft EIR (Errata).) This updated discussion does not affect the EIR's conclusions regarding water supply impacts.

At the present time, the City of Brentwood relies on a series of wells for their domestic water needs. In anticipation of future growth, the City has undertaken the expansion of its wells together with a long-term plan to secure additional raw water. The plan is to purchase 21,000 acre-feet of raw water in three blocks of 7,000 acre-feet each. The long-term strategy is sufficient to supply water through ultimate build-out of the Brentwood General Plan, which assumes 9,814 dwelling units on the properties that are under the ownership of the S. H. Cowell Foundation, and within Spa J. The acreage within the proposed General Plan Amendment would permit 8,554 dwelling units on 4,277 acres.

The Interim Water Supply Study, dated April 1995, has been adopted and provides the mechanism for the first 7,000 acre-feet block (Block A).

The raw water is available from ECCID through options that were purchased by CCWD in 1991. Through negotiation with CCWD and ECCID, the City has acquired the option on the Block A (7,000 acre-feet) ECCID excess water. The City has made two annual option payments and will continue to make these payments through 2009, at which time the transfer of Block A will be complete.

The projected growth assumptions which were used in the development of the City's strategy anticipate buildout of the Cowell Ranch project. The combination of the Block A water, together with the City well system, will provide a capacity of approximately 12,300 acre-feet per year and would be adequate to serve Phase I of the Cowell Ranch project. Phase I, through the year 2010, includes 1,888 dwelling units, 210,395 square feet of commercial/office, 1,158,696 square feet of business park, an elementary school, 2.8 acres of public facilities land uses, and a 6 acre neighborhood park.

Negotiations with CCWD and ECCID are currently underway to secure future Block B and C options to provide the City with water resources through ultimate buildout.

Through an agreement with CCWD, Diablo Water District, and the City, Block A water supply will be treated at the Randall Bold Water Treatment Plant and delivered to Brentwood through a pipeline interconnection that is currently under construction with a projected completion date of July 25, 1997. The agreement to treat at Randall Bold extends through 2003, at which time Brentwood can elect to extend the agreement in the event Randall Bold continues to experience excess capacity. According to City officials, the alternatives which are available include participation in expanding the capacity at Randall Bold Water Treatment Plant or construction of a water treatment plant in southeast Brentwood.

The expansion of Randall Bold or the construction of a new facility will be financed through capital improvements fees collected by the City for water treatment and supply. (Brentwood Capital Improvements Costs and Basis of Development Fees adopted November 14, 1995.)

- 19.08 Comment acknowledged. The comment points out that CCWD does not distribute water in the project area, but sells water wholesale to Antioch and Diablo Water District.

The text on page IV.F--5 of the Draft EIR has been changed accordingly. (See section IV, Revisions to the Draft EIR (Errata).) This updated text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.

- 19.09 Comment acknowledged. This comment suggests wording changes to the second paragraph (and footnote) on page IV.F--5. The suggested wording changes have been made. (See section IV, Revisions to the Draft EIR (Errata).) This updated text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.
- 19.10 Comment acknowledged. This comment suggests wording changes to the second paragraph (and footnote) on page IV.F--5. The suggested wording changes have been made. (See section IV, Revisions to the Draft EIR (Errata).) This updated text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.
- 19.11 Comment acknowledged. This comment suggests wording changes to the second paragraph (and footnote) on page IV.F--5. The suggested wording changes have been made. (See section IV, Revisions to the Draft EIR (Errata).) This updated text

has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.

- 19.12 Comment acknowledged. The comment asks for a more precise description of ECCID water rights. Text has been added to clarify the ECCID water rights. (See section IV, Revisions to the Draft EIR (Errata).) This updated text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.
- 19.13 Comment acknowledged. The comment suggests wording changes to the first paragraph on page IV.F--8 of the Draft EIR. The suggested wording changes have been made. (See section IV, Revisions to the Draft EIR (Errata).) This updated text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.
- 19.14 The comment asks for evaluation of impacts on the fishery resources of the Delta as a result of the water withdrawals that would be required for the project. This updated text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.

The commenter has mis-read or misinterpreted the discussion of project effects on water withdrawals from the Delta. The last paragraph on page IV.F--20 states that there would be a net increase in water use on the project site; it does not say that the project will result in a net increase in withdrawals from the Delta. In fact, the discussion goes on to review and conclude that the water requirements for the project can be supplied from existing Delta sources (BBID or ECCID diversions) at levels that would not result in a net increase of water that has historically been withdrawn (under established water rights) by these irrigation districts. The water to supply the Cowell Ranch project would come from the surplus water that is no longer used to the same extent that it has been used historically for agriculture. Since no net increase in Delta water diversions would occur, the suggested fishery studies are not warranted.

- 19.15 The comment questions the ability of the City of Brentwood to supply water to the project from its 7,000 acre-feet-per-year purchase from CCWD. Please refer to the responses to Comments 2.23 and 19.07.
- 19.16 Comment acknowledged. The comment asks for clarification on references to ECCID's "existing system capacity." The Draft EIR text has been amended to indicate that the ECCID has existing system capacity to obtain and deliver water supplies up to the limit of its water rights, but that system modifications would likely be needed to convert the use of the water from agricultural to municipal uses. (See section IV, Revisions to the Draft EIR (Errata).)
- 19.17 Comment acknowledged. The comment suggests wording changes regarding LAFCO discussion. The reference to LAFCO as a "County" commission has been changed to

"state agency." (See section IV, Revisions to the Draft EIR (Errata).) However, the Draft EIR correctly identifies LAFCO as the "Contra Costa County Local Agency Formation Commission (see Letter 3 from LAFCO).

- 19.18 The comment questions the relevance of the discussion of the Los Vaqueros Project to the Cowell Ranch project, since the Los Vaqueros Project is for the benefit of areas that do not include the Cowell Ranch property. The sentence in question has been deleted. (See section IV, Revisions to the Draft EIR (Errata).) This updated text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.

20. Antero A. Rivasplata, Chief, State Clearinghouse, Governor's Office of Planning and Research; December 2, 1996

Letter acknowledges Lead Agency (County) compliance with State Clearinghouse review requirements for draft environmental documents pursuant to CEQA; no response is required.

21. Barbara A. Alexander, 1980 Montclair Circle, Walnut Creek; December 7, 1996

- 21.01 This is a statement of opinion regarding the proposed project. The comment does not address the adequacy or the completeness of the Draft EIR. The County may consider these statements when making a decision on the proposed project. Public hearings will be held to consider the proposed project after the Final EIR has been published.
- 21.02 Potential project impacts on adjacent agricultural core lands, including the effects of increased urbanization on local agricultural activity and viability, are discussed on Draft EIR page IV.B--21 (*Impact AG-2*) and especially, pages IV.B--22 (*Impact AG-3*), 23, 24, 25, and 26. In particular, the Draft EIR concludes that the project-related loss of lands with prime USDA SCS ratings (*Impact AG-1*), project related cumulative prime agricultural losses (*Impact AG-2*), and the precedent-setting impacts of the project on nearby agricultural uses (*Impact AG-5*), would constitute "significant unavoidable impacts."
- Also note that Response 2.35 suggests additional measures to further reduce the project's impacts on agricultural land including (1) the purchase of development rights or (2) contribution to an agricultural trust.
- 21.03 This comment raises concerns regarding the effects of project-related traffic congestion on air quality. Section IV.K (Air Quality) of the Draft EIR evaluates the effect of project-related traffic, both during construction and at project buildout, on regional and local air quality conditions, and notes potential violations of air quality standards (see *Impact AQ-1* and *Impact AQ-2*).
- 21.04 Project indirect impacts on the economic and social vitality of inner cities may be important regional planning factors, but are not "environmental" concerns requiring EIR consideration under the California Environmental Quality Act. The CEQA Guidelines section 15131 states that economic effects may not be identified as significant environmental impacts unless there is a chain of cause and effect from the economic impact to an adverse physical (environmental) impact. The opinion that additional housing units will over-develop the area and destabilize the local housing market relates to economic factors and does not pertain to an environmental impact. No evidence is provided to demonstrate a chain of cause and effect from an economic impact to a physical impact.

22. Marck Menke, 643 Francis Drive, Lafayette; December 7, 1996

- 22.01 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Land use	IV.A.4	Yes
Open space	IV.A.4	Yes
Wildlife	IV.G.4	Yes
Traffic	IV.C.4	Yes
Public services	IV.F.1-10	Yes
Air quality conditions	IV.K.4	Yes

**23. Cheryl and Jordon Bluestein, 3183 Wayside Plaza #114, Walnut Creek;
December 8, 1996**

- 23.01 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Land use	IV.A.4	Yes
Open space	IV.A.4	Yes
Agriculture	IV.B.4	Yes
Traffic	IV.C.4	Yes
Wildlife habitat conditions	IV.G.4	Yes

24. Lois Brubeck, 731 Cragmont Avenue, Berkeley; December 9, 1996

- 24.01 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Land use	IV.A.4	Yes
Open space	IV.A.4	Yes
Agriculture	IV.B.4	Yes
Biological resources	IV.G.4	Yes

25. Ione Byrnes, 332 Jerome Avenue, Piedmont; December 9, 1996

- 25.01 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Public facilities and services	IV.F.1-10	Yes
Biological resources	IV.G.4	Yes
Air quality	IV.K.4	Yes

26. Donald K. Freedman, 1547 Buckeye Court, Pinole; December 10, 1996

- 26.01 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Land use	IV.A.4	Yes
Agriculture	IV.B.4	Yes
Biological resources (habitat)	IV.G.4	Yes
Air quality	IV.K.4	Yes

27. Tino Bacchini, 1901 Concord Avenue, Brentwood; December 11, 1996

- 27.01 The preliminary development plan and associated P-1 Development Standards and urban design guidelines submitted by the applicant as of April 1996 (the "project description") did not specify earthen berms along the SR 4 Bypass. *Mitigation V-7* on page IV.J--47 of the Draft EIR therefore describes a number of measures deemed necessary to reduce the visual impact concerns mentioned in this comment. The measures include amendment of the project's P-1 District Development Standards to specify and require special roadside setbacks and associated landscaping treatments along the bypass, in accordance with City of Brentwood proposed landscape plans for the corridor.

Planting of dense roadside vegetation is not a highly effective method of traffic noise abatement. In lieu of vegetation, other more effective noise abatement measures are recommended under *Mitigation N-1* on Draft EIR pages IV.J--21 and 22, and *Mitigation N-3* on page IV.J--24.

The noise impacts of the State Route 4 Bypass on adjacent urban uses, and associated mitigation needs, are also addressed in the County-certified State Route 4 Bypass Project Final EIR, November 1994, available for review at the Contra Costa County Community Development Department.

- 27.02 The impacts analyzed in section IV.C, Transportation, of the Draft EIR, concern level of service on the roadway segments and intersections that are significantly affected by the proposed project. The effects of project traffic on land uses adjacent to the roadways used by this traffic are considered in the noise and air quality sections of the Draft EIR. Please refer to the response to Comment 27.01 above.

**28. Daniel M. Smith, Superintendent, Liberty Union High School District;
December 11, 1996**

- 28.01 Comment acknowledged. In response to this comment, Table 50 and corresponding text of the Draft EIR (pages IV.F--78 through IV.F--84) have been revised to reflect the possibility that 20 percent of the units in the Multiple Family Residential Low (ML) designation may be developed as single-family units that may generate students at the rates typically assumed by the Liberty Union High School District for single-family units (see section IV., Revisions to the Draft EIR (Errata)). This revision does not alter the meaning or conclusions presented in the Draft EIR. It is important to note that the actual number of students generated by the project may vary slightly depending upon the specific types of units that are ultimately constructed and the characteristics of the households that ultimately occupy the project. However, the findings of the Draft EIR, that the project would have a *significant impact* on the capacity of the Liberty Union High School District, do not change whether 583 or 609 high school students are generated by the project; this difference between the Draft EIR estimate and the revised estimate is relatively minor. Likewise, the associated mitigation measure (*Mitigation PF-21* on page IV.F--84) remains valid for the revised estimate.
- 28.02 *Mitigation PF-18* on pages IV.F-81 and -82 of the Draft EIR identifies applicant participation in the existing *East Contra Costa County School Facilities Funding and Mitigation Agreement Program* as one of the possible methods of mitigating project impacts on the LUHSD. The final determination regarding whether participation would be required would be specified in the County's conditions of approval and project findings as suggested by the commenter. As stated under *Mitigation PF-18*, the other option for mitigating project impacts on the LUHSD is negotiation of an additional impact fee.
- The District's comments requesting conditions be placed on the project are acknowledged. The Draft EIR properly discussed participation in the East Contra Costa School Facilities Funding and Mitigation Program Agreement as one of the methods of mitigating project impacts. The County may consider the District's request for the permit condition as part of the decision on the project. Public hearings on the proposed project will be held following the publication of the Final EIR.
- 28.03 Pages IV.F-84 and -85 of the Draft EIR identifies an onsite high school site as a possibility and indicates that subsequent environmental review would be required if this option were pursued. Liberty Union High School District states that they need one high school site within the project. The EIR indicates that the project will generate almost one-half the population of a high school (see DEIR page IV.F--84). No onsite high school site is included in the Draft EIR project description; the project applicant has identified a possible location for the high school in comment 84.01. In response to the District's comment, *Mitigation PF-21* (Project Impacts on LUHSD Capacity) on EIR page IV.F--85 has been revised to include designation of a high

school site which meets state site criteria at an appropriate onsite location within the project boundaries. The state criteria are outlined on page IV.F--77 of the Draft EIR. A high school site could be located in an area designated for development and in an area that meets state school site selection criteria.

29. Sumner Walters, Jr., 1217 Skycrest Drive #3, Walnut Creek; December 11, 1996

- 29.01 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Land use	IV.A.4	Yes
Agriculture	IV.B.4	Yes
Traffic	IV.C.4	Yes
Air quality	IV.K.4	Yes

30. Patrick Roche, Staff, TRANSPLAN; December 12, 1996

30.01 The CCTALOS methodology is a variant of the Circular 212 methodology and is the technically accepted methodology established by Contra Costa Transportation Authority (CCTA) members. The CCTALOS methodology program assumes a higher capacity per lane than the Circular 212 methodology (1,800 vehicles per hour per lane versus 1,500). The descriptions of the levels of service provided in Table 14 of the Draft EIR are meant only to be qualitative descriptions of an intersection's performance. Recent changes to signalization have improved the operation of this signal.

The CCTALOS methodology does not measure delays for individual turning movements nor for the intersection as a whole. However, the CCTALOS methodology does give a qualitative description of an intersection's level of service and hence, of the delay experienced by motorists. The driving public's perception of "significant" versus "insignificant" is subjective. The purpose of using a standardized methodology, such as the CCTALOS methodology, is to remove that subjectivity from the analysis.

30.02 The Draft EIR does not analyze existing conditions at the intersection of Fairview Avenue/Lone Tree Way, but does analyze the impact of project and cumulative traffic at this intersection in the "future year scenarios" (i.e., the year 2010 and 2026). It is projected that project traffic would have a potentially significant impact at this intersection in the Year 2010 With Project scenario but not in the Year 2026 With Project scenario (see Draft EIR Tables 28 and 29).

30.03 The commenter notes that the East Contra Costa Transportation Strategic Plan was adopted on May 9, 1996. The key difference between this plan and the working paper cited in the Draft EIR is the adoption of Traffic Service Objectives (TSOs). Please refer to the response to Comment 30.17 below.

30.04 The traffic impact study assumes that the State Route 4 Bypass would be completed as a two-lane roadway by the year 2010 and would serve to mitigate project impacts. In accordance with *Mitigation T-1*, the county would need to condition project Phase I on the available access to the site, with the State Route 4 Bypass being a critical component of the available access. Unless subsequent traffic study information is prepared, the Draft EIR essentially requires that any future housing subdivision or employment-generating use within the Cowell Ranch project that will create a significant traffic impact be accompanied by construction of the State Route 4 Bypass. The Draft EIR discloses significant traffic impacts on the State Route 4 Bypass under Phase I of the project. The Initial Study process would require additional traffic studies if the Bypass did not exist at the time a future development application is received. This conclusion is based on the following specific disclosures in the Draft EIR.

Page IV.C--52 of the Draft EIR discloses that off-site traffic conditions exceeding Level of Service standards may occur due to the timing of roadway improvements. Occupancy of portions of the project in advance of certain road improvements or in advance of certain complementary land uses may result in further degradation of traffic level of service at the locations identified in this EIR as well as at other locations. Page IV.C--54 of the Draft EIR discloses that, based on the traffic analysis prepared at this time, it appears that completion of the roadway improvement measures listed in the tables and text (including portions of the State Route 4 Bypass) would eventually be necessary for each project phase prior to occupancy of associated housing and employment uses.

Mitigation T-1 addresses these potential impacts. The measure requires that any future development application that has the potential for significant traffic impacts must demonstrate that all portions of the road system significantly affected by the project have been improved to meet applicable levels of service (LOS) performance standards following project occupancy. The Draft EIR discloses that Phase I of the project would affect every intersection on the State Route 4 Bypass west of Vasco Road. If these improvements are not complete following project occupancy, the applicant must demonstrate that a funding mechanism and source for the complete cost of the necessary improvements have already been established to provide such improvements when needed. Payment of fees can only satisfy this obligation if the County's Capital Improvement Program (CIP) and the CIPs of other affected jurisdictions demonstrate that those fees and other funding sources will be sufficient to comply with the traffic performance standards (i.e., construction of the Bypass has been scheduled when needed but no later than within five years of project approval).

- 30.05 The Draft EIR (pages IV.C--51 through IV.C--52) summarizes potentially significant impacts on primary and secondary study area intersections. The list of intersections distinguishes between intersections that would experience deficient conditions only under the "With Project" scenarios from those that would experience deficient conditions in future years without the project (i.e., due to cumulative development) by labeling the former intersections with an asterisk. This labeling system thus identifies intersections where the project's contribution to cumulative traffic levels would cause a potentially significant impact. The project applicant would be required to contribute only its fair share to mitigate these cumulative impacts. Other impacts would be "project only" impacts, for which the applicant would be required to fully fund the mitigation measure. Tables 32 and 33 of the Draft EIR identify project and cumulative mitigation measures.

A specific project's proportionate share of new traffic on a roadway or at an intersection would be determined at the time of the project application. The project's proportionate share would then be used to determine the project's fair share. The response to Comment 9.14 discusses how "fair share" funding could be applied to the project.

- 30.06 The commenter refers to the performance standards for the Basic Routes identified in the Contra Costa County General Plan Growth Management Element. That element provides performance standards for intersections, but not for roadway segments. The Contra Costa County General Plan Growth Management Element defines the following performance standards for peak hour level of service:

Rural Areas:	Low 'C' (volume-to-capacity ratio = 0.70-0.74)
Semi-rural Areas:	High 'C' (v/c ratio = 0.74-0.79)
Suburban Areas:	Low 'D' (v/c ratio = 0.80-0.84)
Urban Areas:	High 'D' (v/c ratio = 0.85-0.89)
Central Business Districts:	Low 'E' (v/c ratio = 0.90-0.94)

- 30.07 The commenter is correct that the Draft EIR (pages IV.C--55 through IV.C--56) identified significant unavoidable traffic impacts on Vasco Road (Phases I and II) and on the State Route 4 freeway between Railroad Avenue and the State Route 4 Bypass (Phase II). The County would be required to adopt Statements of Overriding Considerations for these impacts in order to approve the project, as the commenter notes.
- 30.08 The traffic impact study assumes that the State Route 4 widening between Railroad Avenue and the State Route 4 Bypass would be completed by the year 2026 and would serve to mitigate project impacts. In accordance with *Mitigation T-1*, the County would condition approval of specific development applications within Phase I of the project according to progress in completing the widening, as recommended by the commenter. This, however, would only be a temporary mitigation, since full buildout of the project by the year 2026 would create a significant unavoidable adverse impact.
- 30.09 Please refer to Master Response E, item (4) for a discussion of the methodology of projecting future year roadway improvements for the future year analysis and the availability of funding for these improvements. The SR 4 Bypass would need to be widened to six lanes between State Route 4 and Laurel Road. This widening would only be needed for Phase II of the Cowell Ranch project; four lanes would be adequate for Phase I.
- In accordance with *Mitigation T-1*, the exact status of the funding of any specific mitigation measures would be reviewed in the approval of future specific development applications. Any mitigation measures without a feasible funding mechanism would not be considered adequate mitigation measures. Furthermore, for cumulative impacts, all jurisdictions in East County have adopted development mitigations and subregional traffic mitigation programs that require all new development to pay for the transportation facilities necessary to serve the growth pursuant to Measure C-1988.
- 30.10 The request to include affected jurisdictions and agencies in the County's review of the annual mitigation monitoring report is noted. This comment is not related to the adequacy or the completeness of the Draft EIR. Rather, it is related to the

implementation of a mitigation measure. The County could consider including affected jurisdictions and agencies in the review as suggested in this comment. This suggestion will be considered by the County as part of the decision on the project.

- 30.11 Commenter concurrence with the Draft EIR is noted. Additional suggestions provided in this comment letter address the implementation or monitoring of the mitigation measures. As such, these suggestions may be considered by the County as part of the decision on the project.
- 30.12 The Draft EIR did not recommend the widening of the segment of Camino Diablo between Marsh Creek and Walnut Boulevard because it was not determined that this improvement would be required in the Year 2026 With Project Scenario. The dedication of right-of-way was mentioned so that, if this improvement was eventually needed, right-of-way would be available to ensure adequacy of horizontal and vertical curves, sight distance, and the pavement conditions of the existing roadway. If, in review of a specific Phase II development application it is determined that this widening to four lanes would be required, then the project would be required to contribute its fair share of the funding of the widening of this roadway (see *Mitigation T-1*). However, the intersection modifications in *Mitigation T-1*, combined with the change in through traffic movements from the closure of Marsh Creek Road, would require some further improvements which have been incorporated into *Mitigation T-3*.
- 30.13 The proposed project design lists a number of components that are designed to encourage the use of transit to and from the project, including provision of shuttle buses and an adequate number of bus stops. These provisions are designed to encourage the provision of transit service from the local transit agencies, especially Tri-Delta Transit. As recommended in *Mitigation T-12*, the project applicant should coordinate the provision of transit service with these transit operators. Additional requirements to guarantee adequate operation of transit services, such as those suggested by this comment, may be considered as part of *Mitigation T-12*. As indicated in the mitigation measure, if transit service cannot be extended to the site, the unmet demand for this service and associated traffic congestion impacts would represent a significant, unavoidable impact.
- 30.14 For the proposed project to be approved, a Statement of Overriding Consideration would be required for the significant, unavoidable impact if transit service is not provided as defined in *Mitigation T-12*.
- 30.15 The provision of commuter rail service to the project via the Mococo Branch line was not considered, since there is currently no indication that extension of this service will occur or is feasible. CEQA does not require analysis of speculative impacts.
- 30.16 An application for a development agreement is on file with the County. The development agreement will only implement and secure the current project applications, if approved, which include a general plan amendment, rezoning and

preliminary development plan. These applications have been analyzed in the Master EIR. The development agreement is not expected to create any additional environmental impacts that have not been addressed in the Master EIR. If it is determined that the development agreement causes an adverse significant environmental impact that has not been analyzed or mitigated by the Master EIR, then subsequent environmental review will be required consistent with the Master EIR process.

As stated on page III--44 of the Draft EIR, this Master EIR addresses the potential environmental impacts of required jurisdictional approvals, including development agreement approval. The development agreement can include all the conditions of approval and the mitigation measures that will be required of the project. If the conditions and/or mitigation measures are not set forth in the development agreement, the applicant will still be required to comply with the conditions and mitigation measures if they are imposed on the project through its approval. If the project site is annexed to another jurisdiction, and that jurisdiction utilizes the Master EIR before approving any discretionary projects, that jurisdiction must consider imposing the measures set forth in the Master EIR before annexation is approved. In addition, according to state law, if a development agreement is approved by the County and the project site is thereafter annexed to a city, the development agreement will remain valid for the duration of its term or eight years from the date of the annexation, whichever is earlier. The City of Brentwood has been provided a copy of the proposed development agreement. Any other jurisdiction, agency or individual can obtain a copy of the development agreement at the Contra Costa County Community Development Department. As indicated on Draft EIR pages I--2, I--3, and especially III--41 and III--44, it is the county's intention that this EIR will cover the development agreement submitted with the project application. The required CEQA statement of findings and mitigation monitoring process, to be completed prior to Final EIR certification, provide adequate assurance that the project will incorporate the mitigation measures described in this Draft EIR unless there is a sufficient overriding consideration, which would be described in the findings. The development agreement is one application component that can be used to incorporate/implement certain mitigations. Other components of the general plan amendment and preliminary development package, including associated county-adopted conditions of approval, may be the appropriate elements for incorporation/implementation of Draft EIR mitigations. The Mitigation Monitoring Checklist to be submitted with the statement of findings will indicate these mitigation implementation aspects.

Please also see responses to comments 80.01 and 85.02.

- 30.17 Comment acknowledged. In response to this comment, the project's relationship to the traffic service objectives (TSOs) as described in the East County Action Plan have been evaluated, and the results included in Appendix A of this response to comments document. The TSO evaluation does not affect the Draft EIR's conclusions regarding project and cumulative traffic impacts.

31. Robert E. Johnson, 580 Grizzly Peak, Berkeley; December 15, 1996

- 31.01 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Land use	IV.A.4	Yes
Open space	IV.A.4	Yes
Agriculture	IV.B.4	Yes
Traffic	IV.C.4	Yes
Biological resources (wildlife habitat)	IV.G.4	Yes

32. Glen Deardorff, 18250 Crest Avenue, Castro Valley; December 17, 1996

- 32.01 This comment states the commenter's opposition to the project, and does not raise issues regarding the EIR. The County may consider this statement of opposition when making a decision on the proposed project.

33. Dan Dumont, 256 5th Avenue, San Francisco; December 19, 1996

- 33.01 This comment states the commenter's opposition to the project, and does not raise issues regarding the EIR. The County may consider this statement of opposition when making a decision on the proposed project.

34. Art Weber, Transportation Chair, Berkeley Gray Panthers; December 20, 1996

- 34.01 This comment suggests that the County may violate a section of the Civil Rights Act (42 §2000d) if it approves the Cowell Ranch project because approval may violate the rights of transit-dependent passengers. The comment refers to a case where the NAACP challenged the Los Angeles Metropolitan Transportation Authority in providing a new rail system at the expense of the bus system. The comment fails to provide a legal cite or reference to that legal challenge. A thorough review of the reported Civil Rights Act cases does not uncover that action. It is possible that the case was not reported by the court and as such, is not available for review. The comment states that the case was settled which means that a judicial determination was not made and thus, not reported for use as precedent.

The Cowell Ranch project has been designed such that proposed land uses are concentrated around two villages. Within each village, residential, commercial and civic uses are clustered around a village green. The village and outlying neighborhoods are connected by a network of trails and pedestrian/bicycle paths. A major distinguishing feature of the village areas is the proximity of residential uses and employment/retail uses so that the need of automobile trips can be reduced.

In addition, the project has been designed to accommodate bus turn-outs and shelters for the overall bus system that operates in the area. For example, the circulation plan for the project anticipates that the villages will serve as the focal point of transit service to Brentwood and regional transportation corridors. Shuttle buses or demand responsive vans could carry passengers from the project site to downtown Brentwood, a proposed commuter rail line facility, BART terminal stations, and major employment centers in the surrounding region.

The Draft EIR at page IV.C--22 discusses the existing passenger transit service in the project vicinity. In summary, Tri-Delta Transit provides bus service in Brentwood and a dial-a-ride service for elderly and handicapped persons. A BART Express bus service is also provided in Brentwood. It is expected that Tri-Delta Transit will provide bus service to the project area. The specific routes and service information will not be available until the time subdivision maps are considered for the project. The County is not considering approval of subdivision maps at this time, but only the request for a General Plan Amendment. Before subdivision maps are considered for approval, the property would need to be rezoned and preliminary and final development plans would need to be prepared and approved. Subdivision maps have not been filed with the County.

35. Paul W. Rea, 1101 Carey Drive #23, Concord; December 22, 1996

- 35.01 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Land use	IV.A.4	Yes
Open space	IV.A.4	Yes
Agriculture	IV.B.4	Yes
Traffic	IV.C.4	Yes
Biological resources (wildlife habitat)	IV.G.4	Yes
Air quality	IV.K.4	Yes

36. Gary P. Stern, 639 Glorietta Boulevard, Lafayette; December 27, 1996

36.01 See Master Response C.

36.02 Figure 33 shows the study intersections for the Draft EIR. The intersections of Kirker Pass Road/Buchanan Bypass, Kirker Pass Road/Concord Boulevard, Kirker Pass Road/Clayton Road, and Ygnacio Valley Road/Alberta Way were analyzed in the Draft EIR.

Additional analysis was performed as part of this response to comments for a number of intersections in the Central County area. Traffic volumes for these locations were taken from the Central County model and the project traffic was added appropriately. The results of this analysis are shown in revised Tables 30 and 31 (see section IV, Revisions to the Draft EIR (Errata)). This analysis does not produce any changes to the Draft EIR's conclusions regarding project and cumulative traffic impacts.

The future year analysis does consider the growth that is expected to occur in areas throughout the Bay Area. The land use data used for future years were obtained from data prepared by the Association of Bay Area Governments (ABAG) (see Draft EIR, page IV.C--31).

- 36.03 The commenter states that the project impact analysis for sewer, water, and solid waste services should include a countywide evaluation. Although the project is located within Contra Costa County, many of its various public service needs would be provided by established service agencies other than the county. For example, potable water service would be provided by either the city of Brentwood (if portions or all of the project are eventually annexed to the city), or by one or more alternative service choices including the Contra Costa County Water District, the East Contra Costa Irrigation District, and/or the Byron-Bethany Irrigation District; for sewer, the known choices identified in the Draft EIR are the city of Brentwood, or onsite wastewater treatment and disposal. The EIR focuses on the project's potential impacts on the capabilities of these particular service entities to supply the project and anticipated cumulative future service area growth with adequate service. This focus is suggested by the CEQA Guidelines-based significance criteria listed on pages IV.F--14, IV.F--15, IV.F--35, and IV.F--96 of the Draft EIR, which indicate that the project would have a significant impact if it would conflict with applicable plans, require new systems or substantial alterations to existing systems, contaminate a public water supply, or breach published solid waste standards. In the case of solid waste services, the Draft EIR (page IV.F--96) addresses countywide landfill capacity impacts.
- 36.04 The potential precedent-setting effect of the proposed ULL change is addressed on page IV.B--26 of the EIR (see errata herein); also see response to related comments 84.12 and 39.09.

- 36.05 This is a statement of opinion regarding the proposed project. The comment does not address the adequacy or completeness of the Draft EIR. The County may consider these statements when making a decision on the proposed project. Public hearings will be held to consider the proposed project after the Final EIR has been published.

37. David W. Halligan, 2043 Berryman Street, Berkeley; December 30, 1996

- 37.01 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Land use	IV.A.4	Yes
Agriculture	IV.B.4	Yes
Biological resources (wetlands, other wildlife habitat)	IV.G.4	Yes

It is important to note that the Contra Costa County Board of Supervisors may choose to certify the EIR as adequate, but vote to deny the project.

38. Ronald A. Zampa, P.O. Box 142, Crockett; December 31, 1996

- 38.01 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Land use	IV.A.4	Yes
Agriculture	IV.B.4	Yes
Biological resources (wetlands, kit fox habitat)	IV.G.4	Yes

39. John F. Hewett Chapman, 671 Clipper Hill Road, Danville

- 39.01 The commenter states opposition to the project citing, a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Land use	IV.A.4	Yes
Jobs/housing balance	IV.A.4	Yes
Open space	IV.A.4	Yes
Agriculture	IV.B.4	Yes
Traffic	IV.C.4	Yes
Public Services	IV.F.1-10	Yes

Socioeconomic impacts (e.g., inner city disinvestment and social problems) raised by this comment may be considered by the County as part of the decision regarding the project, but are outside the scope of the EIR. CEQA Guidelines section 15131(a) states that *"economic or social effects of a project shall not be treated as significant effects on the environment."*

- 39.02 The comments pertain to the project merits rather than to the adequacy of the Draft EIR. Project impacts on the Brentwood area Agricultural Core are adequately described in the Draft EIR (see response to Comment 39.08).
- 39.03 Please refer to the responses to Comments 78.32, 85.12, 85.23, 85.48, 85.146, 85.148, 85.149, 85.176, and 85.222, which address various assumptions regarding future job and household growth, as well as roadway improvements, that form the basis for the EIR's findings regarding project impacts on land use (including jobs/housing balance), traffic, and air quality conditions.
- 39.04 Project feasibility, financing, fiscal impacts, and mitigation costs are not CEQA-mandated environmental topics, i.e., do not involve physical effects on the environment and under CEQA Section 15131, and cannot be identified as significant environmental impacts. Mitigation cost can become relevant as a factor determining whether a mitigation is or is not feasible, however. Under Public Resources Code section 21081(a)(3), economics can be used as a factor to support a finding of mitigation measure infeasibility. However, the mere fact that a mitigation alternative may be more expensive does not make it infeasible.

The final determination of the feasibility of a mitigation measure is made by responsible agency decision makers when they prepare the CEQA-required findings.

Project impact mitigation responsibilities have been adequately specified in the Draft EIR (see pages II--1 through II--67), and will be further described in the CEQA required mitigation monitoring program and findings prior to Final EIR certification. Ultimately, if the project is advanced, project responsibilities may be addressed in large part in the conditions of approval. With respect to traffic mitigations, regardless of how implementation responsibilities are ultimately assigned, the Draft EIR-recommended, applicant-assigned, transportation performance standard compliance responsibility is designed to reasonably ensure adequate transportation impact mitigation (see *Mitigations T-1* and *LU-11*).

- 39.05 This comment states that the Draft EIR is inadequate, but does not offer any specific reasons for this opinion. The EIR authors disagree with this conclusion based on the analysis of the project presented throughout the Draft EIR.
- 39.06 The Mitigated Alternative (Alternative C as described on Draft EIR pages V--2, and V--9 through V--16) includes avoidance of development on the site's prime agricultural soils (see page V--9). Please also see response to comments 2.30, 39.08, 58.08, 74.48, and 85.36.
- 39.07 The Draft EIR adequately describes project agricultural impacts relative to the agricultural land inventory in the East County subregion. Impacts AG-1 (Loss of Lands with Prime USDA SCS Ratings) and AG-2 (Cumulative Prime Agricultural Losses) adequately describe project impacts on the local and regional prime soil inventory, stating that the project-related loss of 357 acres of prime soils would represent a significant adverse impact based on applicable CEQA criteria and both county and city general plan policy. The stated impacts would apply to both the countywide and the East County prime soils inventory. The relative impacts of the 357-acre loss in the countywide prime soils inventory, versus the East County inventory, would not affect the EIR impact conclusions; the prime soil loss impact would be significant in either case, and the same mitigations would apply. USDA SCS soil ratings for the Brentwood Planning Area are shown on Draft EIR Figure 22. No official information is known on the prime soils total for the East County subregion. Use of such data, if it did exist, or use of more current data, as suggested in the comment, would not change the Draft EIR impact conclusions and mitigation recommendations regarding prime soils and agricultural impacts, regardless of whether the more current or more localized data indicated a greater or smaller relative project loss.
- 39.08 Potential project impacts on adjacent agricultural core lands, including the effects of increased urbanization on local agricultural activity and viability, are discussed on Draft EIR pages IV.B--21 (*Impact AG-2*), and especially, pages IV.B--22 (*Impact AG-3*), 23, 24, 25, and 26. In particular, the Draft EIR concludes that the project-related loss of lands with prime USDA SCS ratings (*Impact AG-1*), project related cumulative prime agricultural losses (*Impact AG-2*) and the precedent-setting impacts of the

project on nearby agricultural uses (*Impact AG-5*) and would constitute "significant unavoidable impacts."

- 39.09 The Draft EIR preparer is the county, not the project sponsor. The Draft EIR analyzes the environmental impacts of the project as proposed by the applicant. The applicant has proposed the changes to the ULL which are in turn reflected and analyzed in the Draft EIR.

The commenter believes that the project is inconsistent with Measure C and the County General Plan and suggest measures that should be required to rectify this. First, since Measure C and associated amendments to the General Plan include a provision and a set of criteria for modifying the Urban Limit Line, it must be assumed that any proposals to change the Urban Limit Line may be considered. As such, a change to the Urban Limit Line may not necessarily be inconsistent with Measure C and thus may not necessarily result in a significant adverse impact (see response to similar comment 84.12). Secondly, regarding the suggestion to eliminate urban uses from the Agricultural Core area, the Draft EIR suggests such a measure, indicating under Mitigation AG-1 (Loss of Lands with Prime USDA SCS Ratings) on page IV.B--21 that redesign of the project to avoid areas of prime agricultural land, including the Agricultural Core area, would mitigate associated impacts. Also, see the response to comment 2.35.

- 39.10 Concerns regarding the need for a match between project-created jobs and the employment needs of East County residents (in terms of job type, income, etc.) are fully and adequately addressed in the Draft EIR. See Master Response C, item 1.
- 39.11 The Draft EIR includes such a mechanism. See Master Response C, item 1.
- 39.12 Please refer to the response to Comment 2.13 for a discussion of the trip distribution predicted by the travel demand forecasting model.
- 39.13 Please refer to the responses to Comment 9.06 (regarding timing of roadway improvements) and Comment 36.01 (regarding onsite job and housing development assumptions). In addition, please refer to the response to Comment 30.04 for a discussion of the issue of the timing of the State Route 4 Bypass construction and the creation of jobs on the project site.
- 39.14 The requested explanation is provided on Draft EIR pages IV.A--40 and 41 (beginning with third paragraph on page IV.A--40). Also, see Master Response C, item 2.
- 39.15 The Draft EIR includes a discussion of project-related housing and jobs balance impacts sufficient to determine the related potential physical environmental impacts of the project. The Draft EIR discussion in this regard is unusually thorough and extensive relative to conventional CEQA practice. See Master Response C, especially item 3.

- 39.16 Please refer to Master Response C, item (7), and Master Response E, item (2), regarding employment assumptions; to Master Response C, item (9), regarding EIR assumptions pertaining to the proposed new community college; and to Master Response E, item (4), regarding future roadway construction assumptions.

The comment mentions the differences between the East County and Central County travel demand models but does not cite specific differences. While the two models are different, both are consistent with the guidelines for travel demand forecasting models developed by the Metropolitan Transportation Commission and both models were developed at the same time. Since only a single model was to be used in the analysis, the East County model was the logical choice. The East County land use and network assumptions are based on extensive additional input from local agencies about development plans and transportation projects within the East County area, where most of the transportation impacts would occur.

The traffic model does consider traffic diversion due to congestion. The model works by decreasing the speeds of roadways as more and more traffic is loaded onto them in accordance with established equations used in Bay Area forecasting models. Even though vehicles may choose another path because of congestion, the model does not automatically assign all over-capacity vehicles to another path; instead, it forecasts longer delays for motorists due to the lower speeds.

A special program was written that determines trip generation for the proposed project and other land uses in the area. This program accounts for the project-proposed community college. The program determines the number of trips from the college during the PM peak hour. Since the period prior to the PM peak hour was not analyzed, trip generation during this period was not analyzed. The PM peak hour, as opposed to the period immediately before it, was analyzed, since the worst traffic conditions are expected during this time. This is standard traffic engineering practice.

- 39.17 *Mitigation T-1* states that, as a condition of approval, each individual future development would need to demonstrate to the satisfaction of the County that measures would be taken to ensure that every roadway component analyzed in the Draft EIR would attain the applicable roadway system performance standard. The two exceptions to this are State Route 4 between Railroad Avenue and the State Route 4 Bypass, and Vasco Road, where significant unavoidable traffic impacts have been identified. These measures would require project contribution of its "fair share" of the cost of the necessary roadway improvements to maintain these performance standards. Through the accompanying monitoring and enforcement provisions specified in *Mitigation LU-11*, building permit quotas could be established as necessary, based on monitored regional traffic conditions and other factors (see Draft EIR, Page IV.A--61).

- 39.18 To ensure a comprehensive traffic analysis, the Draft EIR assumes that Travel Demand Management (TDM) measures could have little or no reduction of vehicular

traffic. The Draft EIR references a document published by RIDES which states that reductions in traffic from ten to twenty percent can be achieved by TDM measures under the right conditions. Since the exact amount of traffic reduction from TDM measures is uncertain, the Draft EIR conservatively assumed no reduction in traffic from these measures. *Mitigation T-1* includes recommendations for TDM measures to be incorporated into the project (see Draft EIR, pages IV.C--58 through IV.C--59).

Please refer to the response to Comment 30.13 for a discussion of the provision of transit service to the proposed project. Please also note that *Impact LU-12* indicates that approximately 3,000 (56 percent) of the project housing units (including 693 senior citizen units) would not be located within convenient walking distance (one-quarter mile) of project jobs and services; accompanying *Mitigation LU-12* recommends an internal transit system, redesign of the Golf Course Residential subarea to include a transit and convenience commercial center, and other transit-related measures to address this problem.

- 39.19 The closure of Marsh Creek Road was considered in the Year 2026 analysis. Thus, the appropriate impacts of this road closure on Vasco Road and State Route 4 were considered.

The impacts due to the project-proposed closure of Marsh Creek Road would consist primarily of forcing motorists to use Camino Diablo instead of the existing Marsh Creek Road. In the Year 2026 With Project scenario, the amount of bi-directional traffic (i.e., total traffic in both directions) on Camino Diablo west of Walnut Boulevard is 706 vehicles during the PM peak hour. To mitigate this impact, the project applicant would be required to dedicate a 110-foot-wide right-of-way along Camino Diablo between Marsh Creek Road and Walnut Boulevard (see *Mitigation T-3*, Draft EIR page IV.C--62). This would allow for the construction of a four-lane arterial. Also, the intersections of Marsh Creek Road/Walnut Boulevard and Camino Diablo/Byron Highway would be mitigated to accommodate the projected increases in traffic due to the closure of Marsh Creek Road (see *Mitigation T-3*).

- 39.20 Figure 33 shows the study intersections for the Draft EIR. The intersections of Kirker Pass Road/Buchanan Bypass, Kirker Pass Road/Concord Boulevard, Kirker Pass Road/Clayton Road, and Ygnacio Valley Road/Alberta Way were analyzed in the Draft EIR.

Additional analysis was performed as part of this response to comments for a number of intersections in the Central County area. Traffic volumes for these locations were taken from the Central County model and the project traffic was added appropriately. The results of this analysis are shown in revised Tables 30 and 31 (see section IV, Revisions to the Draft EIR (Errata)). This analysis does not produce any changes to the Draft EIR's conclusions regarding project and cumulative traffic impacts.

- 39.21 Table 21 of the Draft EIR shows the employment estimates developed by the Contra Costa Transportation Authority (CCTA). These show a total increase of over 46,000 jobs in the East County area from 1990 to 2005. The City of Brentwood alone shows an increase of over 13,000 jobs in the same period. Thus, it is not unreasonable to assume a large increase in employment in the East County area. Also see Master Response C(8).

Economic conditions will ultimately define actual employment levels on the project site and in the East County area. *Mitigation T-1* of the Draft EIR calls for use of performance standards to ensure adequate roadway improvements and an adequate balance between onsite jobs and housing units.

- 39.22 Regional pollutants are the result of modifications and chemical reactions in the atmosphere. Photochemical reactions in the atmosphere involving Reactive Organic Gases (ROG) and Nitrogen Oxides (NO_x) create both ozone and a portion of the PM₁₀ found in the Bay Area atmosphere. Because of the time lag in the formation of regional pollutants and the transport of pollutants by the prevailing wind, the impact of new regional pollutants will be felt downwind of the source. In the case of the proposed project, emissions would eventually be carried by prevailing winds into the Sacramento and San Joaquin Valley air basins.

Higher than normal cancer rates in portions of Contra Costa County are generally thought to be related to the concentration of industrial uses along the northern boundary of the county.

A worst-case analysis of local air quality effects due to project traffic was included in the Draft EIR. The projected pollutant concentrations did not exceed the state/federal ambient air quality standards, which are designed to be levels below which adverse health effects do not occur within the most sensitive portions of the population. The Draft EIR also examines the local air quality impacts of PM-10/dust during construction. In both cases the impacts were found to be less than significant (assuming appropriate construction mitigation measures are implemented). Neither of these pollutants, nor any others generated by the project, are absorbed into the food chain. (One pollutant that could be absorbed, lead, is no longer used in gasoline.)

- 39.23 Please refer to the response to Comment 39.21 regarding the traffic analysis that was used in the air quality analysis. To be consistent and defensible, the air quality calculations must be based on the same traffic analysis that appears in the traffic impact section of the EIR.
- 39.24 There are innumerable schemes that could be presented as alternatives to the proposed project, including the one described in this comment. However, chapter V of the Draft EIR already meets the requirements of CEQA Guidelines Section 15126 (d) by presenting a reasonable range of alternatives.

39.25 See Master Response B re: deferral of mitigation specifics to future study.

With respect to both long term water source for treated and raw water and long term sewer service for the Cowell Ranch project, the Draft EIR discussed and analyzed various water and sewer options. The EIR included all reasonable information available on the various water supply and sewer service options and analyzed the potential impacts of the various options. The Cowell Ranch Master EIR did not defer or ignore the analysis of supplying water or providing sewer services. The Master EIR recognizes that water and sewer must be supplied to the project, that the resources can come from one of the possible options analyzed in the EIR. The Master EIR analyzed the impacts that could result from those options and suggested ways to address those impacts.

The Master EIR includes as much information as feasibly possible with respect to sewer supply. With respect to onsite improvements, the Draft EIR (pages IV.F--35 through F--38) sets forth and analyzes a possible project sewer system. At this preliminary planning stage, CEQA does not require that a specific sewer source and treatment be identified. The Draft EIR (page IV.F--40) recognizes that the secondary impacts resulting from sewer improvements will be evaluated as part of future project specific applications. The Draft EIR concluded that if various options are selected with respect to sewer supply, sewer impacts would be mitigated to a level of less than significant. At this particular time, a determination cannot be made that the project will have less than significant impacts on water and sewer service since the actual facilities to be used are not known at this time. That determination will be made when more information is available at a subsequent and more detailed project application stage. As a result, the conclusions in *Mitigations PF-1, PF-2, PF-3, PF-5, and PF-6* have been changed to state that consistent with the Master EIR approach, additional information will need to be considered at the time site-specific proposals are brought forward to make a determination on the mitigation of this impact. Thus, the impact has been identified as potentially significant and unavoidable. Consistent with the growth management standards contained in the County General Plan (page 4-11), the project applicant will be required to demonstrate that adequate water supply and sanitary sewer quantity and quality can be provided before approval of a subdivision.

Please refer also to responses to Comments 2.23 and 2.24.

39.26 The comment asserts that a long-term supplier of sewer service has not been identified and asks for a postponement of the Cowell Ranch EIR until a detailed analysis of impacts of sewer services is completed.

With respect to both long term water source for treated and raw water for the Cowell Ranch project and long term sewer service, the Draft EIR discussed and analyzed various water and sewer options. The EIR included all reasonable information available on the various water supply and sewer service options and analyzed the potential impacts of the various options. The Cowell Ranch Master EIR did not defer

or ignore the analysis of supplying water or providing sewer services. The Cowell Ranch EIR recognizes that water and sewer must be supplied to the project, that the resources can come from one of the possible options analyzed in the EIR and analyzed the impacts that could result from those options and suggested ways to address those impacts.

The Master EIR includes as much information as feasibly possible with respect to sewer supply. With respect to onsite improvements, the Draft EIR (pages IV.F--35 through F--38) sets forth and analyzes a possible project sewer system. At this preliminary planning stage, CEQA does not require that a specific sewer source and treatment be identified. The Draft EIR (page IV.F--40) recognizes that the secondary impacts resulting from sewer improvements will be evaluated as part of future project specific applications. The Draft EIR concluded that if various options are selected with respect to sewer supply, sewer impacts would be mitigated to a level of less than significant. At this particular time, a determination cannot be made that the project will have less than significant impacts on water and sewer service since the actual facilities to be used are not known at this time. That determination will be made when more information is available at a subsequent and more detailed project application stage. As a result, the conclusions in *Mitigations PF-1, PF-2, PF-3, PF-5, and PF-6* have been changed to state that consistent with the Master EIR approach, additional information will need to be considered at the time site-specific proposals are brought forward to make a determination on the mitigation of this impact. Thus, the impact has been identified as potentially significant and unavoidable. Consistent with the growth management standards contained in the County General Plan (page 4-11), the project applicant will be required to demonstrate that adequate water supply and sanitary sewer quantity and quality can be provided before approval of a subdivision.

Please refer also to responses to Comments 2.23 and 2.24.

39.27 See response to comment 39.04 above.

39.28 The growth-inducing impacts of the project are adequately described in sections IV and VI of the Draft EIR. Please refer to the response to comment 85.128 regarding cumulative projects.

39.29 The comment asks for additional mitigation measures to address the impact of golf course chemical use.

Comment acknowledged. The potential water quality impacts of golf course chemical use and recommended mitigation measures are discussed on pages IV.E--31 to IV.E--34 of the Draft EIR. The following have been added to the list of management measures included in the Draft EIR (see section IV, Revisions to the Draft EIR (Errata)):

- Utilize native grasses as much as possible for rough and transition areas of the golf course to minimize irrigation and fertilizer needs;
- Select turf grasses having high salt/sodium tolerance to reduce the needs for surplus irrigation to control mineral build-up in the soil.
- Employ Integrated Pest Management practices to minimize the dependence on chemicals for pest control.

**40. Roy P. Clark, V.P. Development Operations, Brentwood Country Club;
January 2, 1997**

- 40.01 The specific alignments of Payne Avenue, Concord Avenue, and Fairview Avenue cited by this comment were adopted after the Draft EIR was published. These roadway alignments would not affect the results of the travel demand forecasting model. Only changes in the number of lanes, changes in the roadway's speed, or significant realignment would have an effect on the loading of traffic onto a roadway.

Changes in the boundaries of the Special Planning Areas would also not have a significant effect on the results of the travel demand forecasting model if the overall land use assumptions do not change.

- 40.02 Balfour Road is expected to be a major east-west arterial serving numerous land uses in the area. Segments of Balfour Road other than the one between Concord Avenue and State Route 4 Bypass are likely to experience congestion. The Draft EIR recommends widening of this segment of Balfour Road.

The grade-separated crossing of the SR 4 Bypass between Balfour Road and Marsh Creek Road was selected as a mitigation because it would allow for improved level of service on the Bypass itself, particularly at the intersections with Balfour Road and Marsh Creek Road, and would improve local access to land uses in the immediate vicinity of the crossing. There are a number of alternative roadway designs that could have been considered for analysis. The project designers examined the advantages and disadvantages of many different possible roadway configurations and decided that the one presented in the Draft EIR represented the best possible project design.

Finally, it should be noted that the Draft EIR does not recommend the second crossing of the Bypass as a mitigation measure. It merely recommends the preservation of the appropriate right-of-way should this crossing prove to be necessary in the future.

- 40.03 The congestion referred to is the congestion that would occur at the Balfour Road intersection with the State Route 4 Bypass. The crossing would connect the North Hills subarea (via "M" Street) to the Brentwood city limits (via Fairview Avenue).
- 40.04 The "second" crossing may be more appropriately referred to as the crossing of the Bypass at "M" Street and Fairview Avenue. The "potentially" congested crossing is the crossing at Balfour Road. A specific location and design of the crossing would be determined in later engineering and environmental studies. Any impact on the Brentwood Country Club development plan would be further identified at that time.
- 40.05 Please refer to response to Comments 40.02 and 40.04 above.
- 40.06 Please refer to response to Comment 40.04.

- 40.07 *Impact T-2* defines a cumulative impact. Specific development activity within any of the SPAs may create less-than-significant traffic impacts when examined alone. Because development in all SPAs affect Balfour Road, all have been identified as contributing to a cumulative traffic impact.

41. Gloria Cannon/Joel Summerhill, 4801 Shavano Peak Court, Antioch; January 3, 1997

41.01 See Master Response C, especially item 1.

41.02 The project proposes a number of components that are designed to encourage the use of transit to and from the project, including the provision of shuttle buses and bus stops. *Mitigation T-1* contains further recommendation for transit facilities. These efforts are designed to encourage the provision of transit service from local transit agencies, especially Tri-Delta Transit. As suggested in *Mitigation T-12*, the project applicant should coordinate the provision of transit service with these transit operators. Additional requirements to guarantee adequate operation of transit services may be considered as part of *Mitigation T-12*.

The traffic model, as a multi-modal forecast model, assumes that Cowell Ranch residents would have access to transit available for making trips. The use of transit service is affected by walk-time, wait-time, parking costs and other factors. As a "worst-case" scenario, a relatively small percentage of project residents were assumed to use transit.

As identified in the Draft EIR (*Impact T-1*), project traffic would have a significant unavoidable impact on State Route 4 and on Vasco Road. *Mitigation T-1* recommends mitigation measures for project-related traffic impacts on Deer Valley Road, Lone Tree Way, and Marsh Creek Road. *Impact T-3* and accompanying *Mitigation T-3* address the proposed closure of Marsh Creek Road.

The traffic analysis analyzes roadway segment and intersection level of service based on standard traffic engineering principles and the established standards of the various jurisdictions involved. The Draft EIR explains the details of the traffic impact analysis methodology.

41.03 The comment expresses concern that the provision of water supply for the project would adversely affect existing users that are supplied by CCWD.

The project does not propose to obtain its water supply from CCWD or from the Los Vaqueros Reservoir. There would therefore be no water supply impact on existing areas that receive their supply from CCWD. Please refer to the responses to comments 19.01 through 19.18 (from the CCWD). Please refer also to section IV.F of the Draft EIR.

41.04 This is a statement of opinion regarding the proposed project. The comment does not address the adequacy or the completeness of the Draft EIR. The County may consider these statements when making a decision on the proposed project. Public hearings will be held to consider the proposed project after the Final EIR has been published.

42. William R. Cottrell, 2372 Walnut Boulevard, Walnut Creek; January 3, 1997

- 42.01 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Land use	IV.A.4	Yes
Traffic	IV.C.4	Yes
Air quality	IV.K.4	Yes
Noise	IV.L.4	Yes

Please refer to the responses that follow (42.02 through 42.25) for discussion of specific concerns raised by the commenter. The County may consider the commenter's statements of opposition to the project when making a decision on the proposed project.

- 42.02 The commenter cites/references information that is contained in the Draft EIR. This statement does not address the adequacy or the completeness of the Draft EIR. Accordingly, no further response is necessary.
- 42.03 See Master Response C.
- 42.04 The commenter cites/references information that is contained in the Draft EIR. This statement does not address the adequacy or the completeness of the Draft EIR. Accordingly, no further response is necessary.
- 42.05 These potential visual, noise, air quality, and safety problems are adequately addressed in Draft EIR sections IV.J, IV.K, IV.L, and IV.M, respectively. The commenter cites/references information that is contained in the Draft EIR. This statement does not address the adequacy or the completeness of the Draft EIR. Accordingly, no further response is necessary.
- 42.06 Please refer to the response to Comment 1.20 for a discussion of the methodology of projecting future year roadway improvements for the future year analysis and the availability of funding for these improvements. Please refer also to the response to Comment 30.08.

The "significant unavoidable impact" on State Route 4 under the Year 2026 With Project scenario is noted in the Draft EIR. The commenter cites/references information that is contained in the Draft EIR. This statement does not address the

adequacy or the completeness of the Draft EIR. Accordingly, no further response is necessary.

- 42.07 The "significant unavoidable impact" on Vasco Road is noted in the Draft EIR. The commenter cites/references information that is contained in the Draft EIR. This statement does not address the adequacy or the completeness of the Draft EIR. Accordingly, no further response is necessary.
- 42.08 There is no change in the determination of a Draft EIR impact's significance as a result of TDM measures. While TDM measures are mentioned in *Mitigation T-1* as one of the strategies to be used to reduce roadway congestion, they are not assumed to provide any decrease in traffic.
- 42.09 Comment noted. This comment refers to the possibility for the County (or City) to adopt a Statement of Overriding Considerations for significant unavoidable adverse traffic impacts identified in the EIR. As noted in the Draft EIR (page IV.C--54), section 15093 of the CEQA Guidelines permit the County (or City) to allow the impact if it states in writing the specific reasons to support its action (a Statement of Overriding Considerations).
- 42.10 This comment essentially restates the conclusion of Draft EIR *Impact T-3*. The closure of Marsh Creek Road would have some detrimental effects, such as diversion of traffic. However, the impact could be mitigated through roadway improvements identified in *Mitigation T-3*. Closure of Marsh Creek Road and its preservation as a pedestrian trail could be seen as a beneficial effect that may outweigh the traffic impact associated with the road closure.

Section IV.K (Air Quality) of the Draft EIR evaluates the air quality impacts of the project as proposed, including the proposed closure of Marsh Creek Road.

- 42.11 *Mitigation T-6* requires the project sponsor to submit proposed roadway designs and pedestrian crossings adjacent to school sites to the Contra Costa County Public Works Department for review and acceptance prior to any Final Development Plan approval. The proposed project circulation plan (see Draft EIR Figure 9) is preliminary at this time, particularly in terms of the specific location and design of such features as student/passenger pick-up and drop-off zones. In accordance with *Mitigation T-6*, extensive review will be required by Contra Costa County or the appropriate governmental jurisdiction when development of the individual school sites occurs. Such reviews would include consideration of student safety. The Brentwood Unified School District would be responsible for evaluating project-proposed student drop-off and pick-up provisions.
- 42.12 *Mitigation T-7* calls for shortening this cul-de-sac to a maximum length of 600 feet or providing a secondary access.

- 42.13 Comment noted. *Mitigation T-8* of the Draft EIR calls for revision of the project site plan to provide a separate access to the community college.
- 42.14 *Mitigation T-9* calls for review of proposed Y-shaped intersections at the time of submittal of detailed site development plans, with consideration given to eliminating these intersections and replacing them with infrastructure that would effectively handle the traffic.
- 42.15 *Mitigation T-10* requires submittal of the project's proposed development standards to the Contra Costa County Public Works Department for review and approval. Through this process, the County will ensure compliance with cross section requirements for various street classifications. The project applicant will be required to submit a revised plan showing compliance with the street standards, as the commenter suggests. Provided that the project complies with these requirements, the fact that they were not provided for in the project Preliminary Development Plan (PDP) is not adequate basis for denial of the project. It is not uncommon for road cross sections to be preliminary at the PDP stage.
- 42.16 Comment noted. *Mitigation T-11* requires the project to submit proposed development standards (including locations and configuration of pedestrian and bicycle facilities) to the Contra Costa Public Works Department for review and approval.

The request to include the East Bay Bicycling Coalition as part of the County's review of the proposed development standards is noted. This comment is not related to the adequacy or the completeness of the Draft EIR. Rather, it is related to the implementation of a mitigation measure. The County could consider including the East Bay Bicycling Coalition as part of the review as suggested in this comment. This suggestion will be considered by the County as part of the decision on the project

- 42.17 The proposed project design lists a number of components that are designed to encourage the use of transit to and from the project, including the provision of shuttle buses and an adequate number of bus stops. These provisions are designed to encourage the provision of transit service from the local transit agencies, especially Tri-Delta Transit. As recommended in *Mitigation T-12*, the project applicant should coordinate the provision of transit service with these transit operators. Additional requirements to guarantee adequate operation of transit services may be considered as part of *Mitigation T-12*. As indicated in the mitigation measure, if transit providers cannot afford to extend to the site, the unmet demand for this service and associated traffic congestion impacts would represent a significant, unavoidable impact. Contracts with transit providers cannot be required, as suggested by the comment, if there is a possibility that those providers cannot afford to serve the project site.
- 42.18 This comment expresses agreement with the EIR findings on pages IV.F-57 and -58, that unless adequate emergency access is provided, fire protection and emergency medical service would be compromised.

- 42.19 *Mitigation PF-23* (Draft EIR, page IV.F--87) requires the applicant to work with the Brentwood Unified School District (BUSD) to formulate a busing plan that would be incorporated into the *School Phasing Plan* required by *Mitigation PF-19*. This requirement appears to address the concern raised by the commenter. The Draft EIR traffic analysis did not make any assumptions regarding bus service for purposes of analyzing onsite roadway circulation.
- 42.20 As described under the "Mitigated Alternative," in chapter V of the Draft EIR, any housing units to be relocated would be moved to less environmentally sensitive locations thereby reducing environmental impacts. Based on the analysis of the Mitigated Alternative in the Draft EIR, it is not anticipated that a new EIR would be required if this alternative were selected as the proposed project.
- 42.21 CEQA requires the lead agency to eliminate or minimize significant environmental impacts associated with projects. If an EIR indicates that a proposed project will have a significant impact, the document should identify feasible mitigation measures to reduce the impact below a level of significance. If, after the identification of mitigation measures, a project is still deemed to have significant environmental impacts and the decision-making body approves the project, the lead agency must adopt a Statement of Overriding Considerations to explain why further mitigation measures are not feasible and why approval of a project with significant unavoidable impacts is warranted.
- 42.22 Specific mitigation measures necessary to achieve compatible noise levels will be developed at the time that specific development applications are reviewed. Specific noise mitigation measures cannot be determined until that time. *Mitigation N-1* on page IV.L--21 of the Draft EIR identifies the types of mitigation measures that would be incorporated into projects where incompatible noise levels have been identified, and outlines the administrative procedure that the County would follow in approving subsequent projects on a case-by-case basis. Please refer also to the "Master Response" regarding the use of Master EIRs in section III.C (Master Response A) of this Final EIR.
- 42.23 The comment states that project traffic would contribute to cumulative increases in traffic noise along Concord Avenue, Camino Diablo and Walnut Boulevard and further states there is no feasible mitigation for existing residents in these areas. This comment restates *Impact N-13* and *Mitigation N-13*. The commenter references information that is contained in the Draft EIR. This statement does not address the adequacy or the completeness of the Draft EIR. Accordingly, no further response is necessary.
- 42.24 Please refer to the response to Comment 1.20 for a discussion of the methodology of projecting future year roadway improvements for the future year analysis and the availability of funding for these improvements.

- 42.25 It was necessary to include a year 2026 buildout projection in the Draft EIR given the size and anticipated absorption rate of the project (approximately 25 years). Because of the difficulty and speculative nature of such long-term impact projection and the likelihood that cumulative conditions and adopted transportation operational standards may change substantially over this 25 year period, the traffic mitigation section of the EIR relies on compliance with adopted roadway system *performance standards* in effect at the time that various future individual subsequent components of the project (subdivision maps, etc.) come forward as individual projects for environmental review.

**43. Brad Olson, Environmental Specialist, East Bay Regional Park District;
January 3, 1997**

43.01 Comment acknowledged. Resource management plans for the Vasco Caves Regional Preserve (see Vasco Caves Regional Preserve, Draft Resource Management Plan) and the Los Vaqueros watershed focus on the protection and management of sensitive natural resources, including the San Joaquin kit fox and red-legged frog. Potential impacts on the sensitive species and habitats of the Los Vaqueros watershed resulting from development on the project site would be of three types:

- The loss of foraging habitat for any terrestrial vertebrates whose home range includes a portion of the project site;
- Development within animal movement corridors through the project site, such that migratory, home range and dispersal movements of terrestrial vertebrates moving from the Los Vaqueros watershed to other suitable habitats north of the project site is permanently blocked; and
- Recreational usage of Vasco Caves Regional Preserve by project occupants.

With respect to the first two of these impacts, the proposed project sets aside approximately 2,700 acres as open space managed for sensitive biotic resources. An additional 700 acres of existing kit fox habitat may be provided in a yet-to-be designated location offsite. Onsite open space would be contiguous with the Los Vaqueros watershed lands to the south (see Figure 17 in the Draft EIR). This open space includes nearly all of the Briones Valley, thus providing San Joaquin kit foxes and other terrestrial vertebrates of the Los Vaqueros watershed a direct route to the Black Diamond Mines Regional Preserve. Furthermore, this open space would be managed so as to improve habitat for sensitive species. The project therefore would not be expected to affect foraging habitat and animal movement corridors on the watershed lands.

Section IV.G (Biological Resources) of the Draft EIR has been revised to include this discussion (see Errata section). Please refer to the response to Comment 43.08 for discussion of project impacts on recreational usage of Vasco Caves Regional Preserve.

43.02 A review of the *Round Valley Regional Preserve Land Evaluation for Interim Use* (East Bay Regional Park District, 1996) indicates that the general goals of the plan and many of the implementation measures are the same as those contained in the draft *Habitat Management Plan* for Cowell Ranch and the Draft EIR. For example, both documents proposed to use grazing as a resource management tool, exclude cattle from sensitive riparian areas, develop grazing strategies that favor sensitive species, eliminate the use of rodenticides, and monitor sensitive species over time. Therefore, the measures proposed by the applicant in the draft *Habitat Management*

Plan and by the Draft EIR are consistent with the management goals of the East Bay Regional Park District.

- 43.03 No specific impact has been identified in the Draft EIR to require the mitigation measure of a trail along Marsh Creek north of Cowell Ranch as suggested in this comment. Under CEQA, in order to require implementation of a mitigation measure, a nexus must be established between a specific impact and mitigation measure.
- 43.04 Comment noted. As discussed on page IV.F--69 of the Draft EIR, the Cowell Ranch project provides for (1) possible dedication to a public agency (such as the EBRPD) of 3,008 acres of proposed onsite open space land, and (2) a right-of-way and trailhead for the EBRPD-proposed *Round Valley to Big Break Trail* along a two-mile stretch of Marsh Creek through the project site. These aspects of the project would be subject to the policies of the East Bay Regional Park District Master Plan (1997), which was adopted on December 17, 1997, after the Draft EIR was published for public review in October 1996. The Master Plan contains policies that address management of vegetation, wildlife, water resources, cultural resources, public access, and recreational facilities and services on EBRPD lands, as well as policies for land acquisition. The relationship of the proposed project provisions and Draft EIR-recommended mitigations to the Master Plan goal statements cited by the commenter are reviewed below:

- **Acquire and preserve significant biologic, geologic, scenic, and historic resources within Alameda and Contra Costa Counties.**

As noted by the commenter, the Master Plan identifies Cowell Ranch as a potential regional park site. The project provides for possible dedication to a public agency (such as the EBRPD) of 3,008 acres of proposed onsite open space land, as well as dedication of a right-of-way and trailhead for the *Round Valley to Big Break Trail*. *Mitigation PF-16* (Draft EIR, page IV.F--70) recommends that, as proposed by the project, all or a substantial portion of the 3,008 acres of open space be made available for an appropriate public agency, agencies, and/or open space conservation entity. *Mitigation PF-16* also recommends that the *Round Valley to Big Break Trail* right-of-way and existing and proposed trailheads be dedicated to the EBRPD or other public agency, with the EBRPD or other public agency given the opportunity to review the location and design of the proposed trail and trailhead. With implementation of this mitigation measure, the project would be consistent with this Master Plan goal statement.

- **Manage, maintain and restore the parklands so that they retain important scenic, natural and cultural values.**

Mitigation PF-16 discussed above would also assist the project in achieving consistency with this goal statement.

- **Provide recreational development that fosters appropriate use of parklands while preserving their remoteness and intrinsic value.**

Mitigation PF-16 discussed above would also assist the project in achieving consistency with this goal statement.

- **Participate in partnerships with public agencies, non-profit organizations, volunteers, and the private sector to achieve mutual goals.**

Mitigation PF-16 discussed above would help to achieve this goal as it relates to the Cowell Ranch project.

- **Provide leadership to help guide land use decisions of East Bay governments that relate to the District.**

The commenter's statement regarding EBRPD's intent to continue to work with the County, City of Brentwood, and project applicant is noted.

- 43.05 As stated on page IV.F-69, the project proposes to provide a right-of-way and trailhead for the *Round Valley to Big Break Trail*. The proposed development plan (see Figure 8 in chapter III of the Draft EIR, Project Description) incorporates the East Bay regional Park District (EBRPD)- proposed *Round Valley to Big Break Trail* along Marsh Creek extending approximately two miles through the project site from Concord Avenue at the northern end of the site to Camino Diablo/Marsh Creek Road at the southern end. Mitigation PF-16 on page IV.F-70 of the Draft EIR includes measures to ensure that the trail right-of-way and trailhead are dedicated to the EBRPD or other public agency and that EBRPD has an opportunity to review the specific alignment and design of the trailhead the specific location and design of the trailhead.

Figure 3 on page 74 of the EBRPD Master Plan 1997 (adopted December 17, 1996) illustrates that the future *Round Valley to Big Break Trail*, would run through the Cowell Ranch property and connect with the future *Black Diamond Mines to Round Valley Trail*. However, the location of the future *Black Diamond Mines to Round Valley Trail* appears to be located outside of the boundaries of Cowell Ranch. Therefore, unless the location of the future *Black Diamond Mines to Round Valley Trail* has changed since the adoption of the Master Plan 1997, it is not anticipated that this trail would be constructed through Cowell Ranch.

- 43.06 Figure 1 was prepared to illustrate the regional location of the project and not to identify collector roads. Marsh Creek Road is illustrated on Figure 27 (Existing Local and Project Study Area Roadway Network) of the Draft EIR (page IV.C--2). Morgan Territory is not a local route.

A screening analysis using the East County Model was conducted by the EIR traffic consultant, DKS, to determine the scope of the traffic analysis (see Draft EIR p. IV.C--8). Based on adopted Contra Costa Transportation Agency and TRANSPLAN criteria

and the professional judgment of county transportation engineering staff and DKS, Morgan Territory Road was not identified as a roadway segment subject to substantial impacts from the Cowell Ranch project. Also, the route is not part of the Measure C Regional Route Network or CMP Network. Please also see responses to comments 1.08, 52.02, 74.22 and 30.06.

- 43.07 See response to comment 43.06 above.
- 43.08 The Draft EIR finds on page IV.A--45 that the project would have a less-than-significant impact on the four EBRPD facilities listed on page IV.A--19. These four listed facilities are more likely to be affected than the Vasco Caves Regional Preserve--i.e., the addition of Vasco Caves Regional Preserve to the list would not change the EIR findings with respect to project impacts on EBRPD facilities. The Vasco Caves Regional Preserve is located approximately 10 driving miles southeast of the project site and, as noted by the commenter, is not yet open to the public.
- 43.09 The comment is acknowledged. The Draft EIR has been amended to incorporate this correction. This additional (or updated) text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR. (See page IV.A--19 errata herein.)
- 43.10 Please see responses to comments 43.11, 43.12, and 43.13.
- 43.11 Please refer to the response to Comment 2.13 for a discussion of the trip distribution predicted by the travel demand forecasting model.

Since the future year models are based on future year land use assumptions, and not on existing traffic counts, the more recent higher traffic counts mentioned by this comment would not affect the results of the travel demand forecasting model.

Please refer to the response to Comment 1.06 for discussion of the effect of the project on minor streets off of Marsh Creek Road.

- 43.12 Please refer to the responses to Comments 1.12 and 43.01. Please refer also to sections IV.A (Land Use), IV.F.5 (Public Facilities, Parks and Recreation), and IV.J (Visual Factors), which address project impacts on Round Valley Regional Preserve. As noted in the responses to Comments 1.12 and 43.01, habitat preservation proposed by the project is considered adequate to offset impacts on kit fox lands managed by EBRPD. While the page number cited by this comment does not correspond to a page number in the Draft EIR, the commenter may be referring to page IV.F--61, which contains a discussion of regional parks operated by EBRPD and notes that *"...the contra Costa Water District (CCWD) Los Vaqueros Reservoir Watershed area may be available for regional recreational use in the future."* This statement provides environmental setting information that is not affected by the concerns raised in the comment.

- 43.13 Please refer to response to Comment 43.02, which discusses the Draft EIR's evaluation of impacts on Round Valley Regional Preserve. The presence of unleashed dogs in the dedicated open space of Cowell Ranch could affect kit fox use of those lands. The EIR requires that leash laws be strictly enforced (see *Mitigation BR-8*, Draft EIR page IV.G--48). An enforcement mechanism would be required, whether dogs are prohibited, or just unleashed dogs are prohibited.

Implicit throughout all the mitigation measures of the EIR is the development of an administrative structure necessary to implement the mitigation measures and manage the open space preserve according to the provisions of the final habitat management plan and the EIR. The applicant would be unable to comply with any of the mitigation measures without this administrative structure. Various options are being considered. Included among them is the transfer of the open space lands to a public agency or private trust organization, or the administration of the lands by the Cowell Foundation or by a homeowner's association. Whoever eventually assumes responsibility for the management of the open space reserve, all provisions of the habitat management plan (and the EIR), including the enforcement of leash laws, must be implemented. Contra Costa County, or its designee, is responsible for ensuring that all mitigation measures are implemented in accordance with the provisions of Public Resources Code Section 21081.6 (AB 3180, Chapter 1232, Statutes of 1988).

Impact PF-16 identifies the increase in regional park demand created by the estimated 13,076 project residents as a potentially significant impact. *Mitigation PF-16* requires the project applicant to (1) make all or a substantial portion of the proposed 3,008 acres of permanent onsite open space available to an appropriate public agency or conservation entity; (2) dedicate onsite trail right-of-way, the proposed Marsh Creek Road trailhead, and the existing leased Round Valley Regional Park trailhead to the East Bay Regional Park District (EBRPD) or other public agency; and (3) allow EBRPD or other public agency to review the trail alignment and design, and the proposed Marsh Creek Road trailhead location and design, prior to final approval. In the opinion of the EIR consultants, this mitigation is adequate to reduce the project's impacts on regional parks to a less-than-significant level. Requirements for additional mitigation may not be legally defensible, since the relationship (or "nexus") between the project impact and the additional mitigation would be less clear.

- 43.14 The traffic volumes mentioned in the comment and those used in the Draft EIR are different because they are several years apart. As noted in the Draft EIR, the traffic counts obtained for the analysis are from 1993.

Since the future year model is based on future year land use assumptions, and not on existing traffic counts, the more recent higher traffic counts would not affect the results of the travel demand forecasting model.

- 43.15 Please refer to the response to Comment 78.31 for additional accident rate data for Marsh Creek Road. As discussed in the response to Comment 43.14, the higher

existing traffic count for Marsh Creek Road would have no bearing on the results of the travel demand forecasting model, which is based on future year land use assumptions.

See the response to Comment 1.06 for a discussion of future traffic conditions near the entrance to Round Valley Regional Park.

- 43.16 Formal and informal park-and-ride locations in Contra Costa County are typically found in locations where traffic converges so that people may transfer from one vehicle to another. The future Round Valley Regional Park parking lot mentioned by the commenter is not such a location. Thus, the use of the Round Valley parking lot as a park-and-ride facility is unlikely.

The residential and employment portions of the project would be required to provide parking in accordance with applicable standards. Compliance with these requirements is expected to provide adequately for the parking demand from the project. If use of this parking lot by project residents or employees becomes a problem there are numerous mechanisms by which this can be discouraged; these might include posting of signs noting the parking restrictions, and reminders to employees and residents provided by project employees and local homeowners' associations.

- 43.17 Please refer to the response to Comment 1.12.

- 43.18 Trail crossing details are typically resolved when trails are designed by the trail sponsor. If a trail crossing occurs where the traffic volumes are significantly increased by the proposed project to the point where safety becomes an issue, then the project applicant should be required to fund its fair share of improvements to the crossing such as adequate signing or flashing warning lights. These types of issues will be addressed when the trail is designed.

- 43.19 The comment asks about flooding impacts of the project on the proposed Marsh Creek Trail.

Hydrological analysis has shown that the proposed project would not increase the flooding conditions on Marsh Creek downstream of the project (see response to Comment 1.10). The flooding problems on Marsh Creek are an existing condition. The drainage plan for the project in combination with proposed changes to the Marsh Creek Reservoir would reduce downstream flooding on Marsh Creek. Nevertheless, downstream flooding hazards would continue to exist due to the current lack of capacity in Marsh Creek in the reach immediately below the reservoir. *Mitigation D-4* calls for the development and implementation of a plan to correct the existing flooding problem. As noted in the response to Comment 1.10, the plan for flood control measures on Marsh Creek should account for and accommodate the proposed Marsh Creek Trail.

- 43.20 The comment asks that the East Bay Regional Park District be consulted in regard to flood control planning for Marsh Creek to assure suitable alignment for the proposed creek trail. Please refer to the responses to Comments 1.10 and 43.19.

The request to include the East Bay Regional Park District (EBRPD) in the County's review of Marsh Creek design improvements is acknowledged. This comment is not related to the adequacy or completeness of the Draft EIR. Rather, it is related to the implementation of a mitigation measures. The County could consider including the EBRPD in the review as suggested in this comment. This suggestion will be considered by the County as part of the decision on the project.

- 43.21 The fire protection analysis and discussion in section IV.F.4 of the Draft EIR adequately addresses the fire protection concerns raised by the project. Project effects on the need for increased fire prevention and protection at Round Valley and the proposed Cowell Ranch open space areas are addressed on draft EIR pages IV.F--51 through IV.F--59.

The East Diablo Fire Protection District (EDFPD) provides primary fire protection for a 210-square-mile area of east Contra Costa County, including the unincorporated project site. The closest existing EDFPD station to the project site and the Round Hill and proposed Cowell Ranch open space areas is located at 3981 Walnut Boulevard in Brentwood; there are current plans to relocate the station closer to the site, near the future intersection of Concord Avenue and Balfour Road, north of the project site. As explained on page IV.F--51, existing wildland fire protection service in undeveloped areas of the East Diablo Fire Protection District (EDFPD) is provided by the California Department of Forestry (CDF). Cowell Ranch and its surrounding open space environs are served by the CDF station on Marsh Creek Road, approximately ten miles to the west of the project site.

The introduction of project-related urban activity would increase potentials for wildfire in the Round Hill and Cowell Ranch open space areas.

The DEIR recommendation under *Mitigation PF-11* for fire buffers and fire breaks pertains to future tentative subdivision maps; with respect to impacts on sensitive species, the mitigation language on Draft EIR page IV.F--57 states that these fire buffer and fire break provisions must be submitted "to the Contra Costa County Community Development Department for review to also ensure that any adverse biological impacts that may result from the incorporation of such fire protection measures are avoided."

The Draft EIR explains on page IV.F--55 that the EDFPD would require two new onsite fire stations, along with additional staffing and equipment. Draft EIR *Mitigation PF-11* requires that provisions for these facilities, including timing, be included in the project *Public Services and Facilities Plan*. Provision of these new facilities, properly phased, would be expected to provide wildfire fighting capabilities to augment CDF

capabilities and offset project-related increases in wildfire potentials in Round Hill and Cowell Ranch open space areas.

- 43.22 The applicant has proposed a conceptual habitat management plan for the San Joaquin kit fox and other sensitive species. Using livestock grazing as a management tool, annual grasses would be maintained at a height of two to three inches. In addition to improving habitat for many sensitive species, this practice would significantly reduce fuel loading and, therefore, the risk of grassland fire. Furthermore, the Draft EIR (pages IV.F--56 and 57) requires the applicant to (a) prepare a *Public Services and Facilities Plan* (PSFP) that specifies funding for and phasing of fire protection services and facilities, for review and approval by the East Diablo Fire Protection District; and (b) comply with site and building design features (including incorporation of fire breaks and buffers into tentative subdivision maps) to reduce fire hazards. Implementation of these measures would result in additional fire services being provided as the project is constructed, thus decreasing response time for any fires that may occur. There is no evidence, and the commenter has not provided such evidence, that the above measures would affect the East Bay Regional Park District's ability to manage its sensitive natural resources at Round Valley or other public lands within its jurisdiction.
- 43.23 The request to include the East Bay Regional Park District (EBRPD) as part of the County's review of the Marsh Creek Trail alignment and design downstream of the Cowell Ranch site is acknowledged. This comment is not related to the adequacy or completeness of the Draft EIR. Rather, it is related to the implementation of a mitigation measures. The County could consider including the EBRPD as part of the review as suggested in this comment. This suggestion will be considered by the County as part of the decision on the project.
- 43.24 Project impacts on wetlands were determined using the wetland delineation prepared by Zentner and Zentner in 1993 (see page IV.G--37 of the Draft EIR). This delineation was verified by the U.S. Army Corps of Engineers on April 5, 1994. Wetlands on the site are shown in Figure 54 of the Draft EIR. Some of these wetlands are wet grassy swales that function ecologically like other non-native grasslands of the site and were described in the Setting section under "Non-native Grassland". Impacts on such areas are nonetheless considered "potentially significant", as discussed under *Impact BR-4 (Loss of Jurisdictional Waters)*, and mitigation has been required, as described under *Mitigation BR-4*.

As noted in the Draft EIR (pages IV.G--8 and IV.G--9), some areas identified by Zentner and Zentner as "wet meadow" appear to be inundated during portions of the winter and spring. Such areas also support some plants common to vernal pools. The EIR requires an inventory of such areas for their attributes, including the presence of various species of freshwater shrimp federally listed as threatened or endangered, so that they can be replaced in kind. Such an inventory was conducted by Huffman and Associates for the project applicant during the winter of 1996-97.

- 43.25 Comment noted. The commenter references information that is contained in the Draft EIR. This statement does not address the adequacy or the completeness of the Draft EIR. Accordingly, no further response is necessary.
- 43.26 Use of the project site by San Joaquin kit fox has yet to be documented. The biological resources evaluation in the Draft EIR assumes that kit fox may use the site. The extent of kit fox movement between Round Valley Regional Park and Black Diamond Mines Regional Preserve is currently unknown. Cowell Ranch is located well east of the direct route between Round Valley and Black Diamond Mines. The project proposes that the Briones Valley portion of the site and lands between the Briones Valley and Marsh Creek Road remain undeveloped. It is therefore unlikely that the proposed project would substantially affect kit fox movement between these two parks.

Most high-speed roads proposed by the project would be surrounded by urban development. It is unlikely that kit foxes would be moving across high-speed roads with urban development on either side. Major thoroughfares and other arterial streets, particularly those connecting residential areas separated from the village centers by open space, would be equipped with exclusionary fencing (see page IV.G--49 of the Draft EIR). The exclusionary fencing would direct kit foxes moving through open space corridors to road undercrossings designed to facilitate kit fox movement. These measures are expected to reduce traffic mortality to kit foxes to a less-than-significant level.

- 43.27 The use of the word "historic" was not intended to suggest that kit fox are no longer present at any of the referenced locations. Although relatively little is known about San Joaquin kit fox in eastern Contra Costa County (relative to population size, movements, etc.), the EIR has clearly made the presumption that kit fox occur in the area and that the proposed project would have potentially significant adverse effects on this species, unless mitigated as recommended in the Draft EIR.
- 43.28 At the time that the Draft EIR was prepared, the U.S. Fish and Wildlife Service (USFWS) mitigation requirements were a 3:1 compensation ratio for each acre of natural (suitable) San Joaquin kit fox habitat and 1:5 for each acre of disturbed or marginal habitat. Recent discussions with the USFWS confirm that mitigation requirements are now calculated somewhat differently from one year ago. Mitigation for orchards and row crops adjacent to suitable kit fox habitat is now 1.5:1 for only that area located within 300 feet of the given orchard's or field's perimeter. The EIR did not consider the orchard to be suitable kit fox habitat. Accordingly, mitigation was not required and the appropriate locations where such mitigation shall take place for the loss of the orchard. Ultimately, the maximum amount of mitigation required will be determined by means of consultation and negotiation among the applicant, the California Department of Fish and Game, and the U.S. Fish and Wildlife Service, as noted on page IV.G--51 of the Draft EIR.

- 43.29 Please refer to the response to Comment 43.13.
- 43.30 It would be appropriate to provide undercrossings and directional fencing on Marsh Creek Road and Camino Diablo. The Draft EIR (*Mitigation BR-8*, page IV.G--49) requires that undercrossings be provided wherever roads cross undeveloped wildlife movement corridors. This may involve acquisition of other lands or easements along Marsh Creek Road, as suggested by the comment.
- 43.31 Comment noted. The EIR appropriately provides some flexibility on the operation and management of the proposed open space. The EIR recommends that a final HMP be developed, and identifies required provisions of the HMP. The details of the HMP will be subject to consultation with County Community Development Department staff. The County and applicant may consider various options for the management of the designated open space, including transfer of the open space lands to a public agency or private trust organization, or the administration of the lands by the Cowell Foundation or a homeowner's association. The Contra Costa County Board of Supervisors will be responsible for determining responsibility for open space management. Also, see Response 1.11.

CEQA does not require an analysis of the economic effects of an impact unless there is a chain of cause and effect linking a significant adverse physical (environmental) impact. There is no evidence to demonstrate such a chain of cause and effect.

- 43.32 Although studies might be undertaken to identify where tiger salamanders aestivate on the project site, the information derived from such studies would only be useful if there were sufficient flexibility in the project plan to avoid the development of areas where aestivation occurs. Based on an analysis completed by H.T. Harvey and Associates for the project applicant in 1993, most areas proposed for development provide suitable aestivation habitat. The herpetologist serving as the consultant for this EIR concurs. Only the steepest slopes and the existing onsite orchard would be considered marginal or unsuitable aestivation habitat. Therefore, development of 1,269 acres of the project site, as proposed by the project applicant, would eliminate both breeding and aestivation habitat for California tiger salamanders, as discussed in *Impact BR-10* of the Draft EIR. These losses are not hypothetical. Large numbers of salamanders may aestivate in this habitat, or not. In either case, there would be a potentially significant impact on tiger salamanders that has been identified in the EIR.

The sole purpose of constructed barriers along roads and the perimeter of developed areas is to direct salamanders away from hazards. A study identifying aestivation habitat is not needed to accomplish this purpose. The final HMP, however, would include a provision to monitor rodent populations (primarily California ground squirrels) in order to ensure that range management practices are favoring this species. It is expected that a restoration of ground squirrel populations on the project site to levels more typical of rangeland in other portions of the California tiger salamander's range would substantially improve aestivation habitat.

LSA Associates surveyed all stock ponds for California tiger salamander larvae during the spring of 1993. The results of this survey have been summarized in the EIR. The locations of stock ponds in which larvae were observed are depicted in Figure 56 of the Draft EIR.

The proposal to trap adult tiger salamanders for relocation "to areas where there are both estivation and breeding sites without barriers" has merit. The discussion of *Mitigation BR-10* has been revised to add that "adult salamanders should be collected during one or more breeding seasons prior to project construction within construction impact zones and relocated to the replacement breeding habitat constructed within the open space preserve. Methods of collection (i.e., flashlight searches during the rainy season, directional fencing which concentrates salamanders at collection points, etc.) can be identified in the final HMP." (See section IV, Revisions to the Draft EIR (Errata)).

Development on the project site would be located three to four miles from Round Valley Regional Preserve. It is unlikely that the project would affect the long-term management of tiger salamander mitigation sites in Round Valley.

- 43.33 Red-legged frogs were found in one stock pond located in the southeast corner of the project site. They may occur in Marsh Creek upstream from Marsh Creek Reservoir. Their presence in Marsh Creek Reservoir cannot be confirmed based on data compiled for the Draft EIR evaluation. Marsh Creek downstream of the reservoir provides marginal habitat for this species. The creek is dry during the summer and fall and, according to LSA biologists, emergent vegetation is absent. With development of the project as proposed, the most likely red-legged frog habitat on the project site would remain undeveloped in the open space preserve. The Draft EIR (pages IV.G--54 to IV.G--55) has concluded that impacts on red-legged frogs (including impacts from degradation of water quality, flood control improvements, loss of seasonal wetlands and predation by feral cats) would be less-than-significant for this reason. Furthermore, the EIR recommends that the applicant mitigate impacts on water quality and wetlands. It should also be noted that, since the California red-legged frog was recently listed as a federally threatened species, the applicant would be required to comply with survey and mitigation requirements, if any, of the U.S. Fish and Wildlife Service during the Section 7 Consultation.
- 43.34 *Mitigation LU-7* (Draft EIR, page IV.A-47), *Mitigation PF-17* (Draft EIR, page IV.F--71), and *Mitigation CR-4* (Draft EIR, page IV.I-16) identify measures to avoid impacts to the John Marsh house and its contributory setting. These measures address the concerns raised by the commenter regarding protection from pedestrian traffic and other urban encroachment, and types of access to be provided. It should be noted that, in response to these Draft EIR mitigation recommendations, the applicant has submitted revised project plans that provide for realignment of Cowell Ranch Parkway to avoid the John Marsh Home site (see Comment 84.01).

- 43.35 Comment acknowledged. A revision to Draft EIR page IV.J--48 is included in section IV, Revisions to the Draft EIR (Errata), to incorporate this EBRPD correction. This additional (or updated) text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.
- 43.36 The EIR authors believe that *Mitigation V-8* on Draft EIR page IV.J--49 provides a reasonable level of mitigation to reduce project impacts on views from Morgan Territory Regional Preserve. Nevertheless, the County (or City of Brentwood) should also give careful consideration to these additional mitigation suggestions submitted by the EBRPD. However, the addition of these measures would not change the overall conclusion that this impact (*Impact V-8*) would remain significant and unavoidable.

Please note that the applicant has redesigned the project in the area of Planning Areas 31 and 32 to address visual and biological impacts (see Comment 84.01). The redesign eliminates 216 units from these Planning Areas. Please refer to "Master Response D" for a discussion of the proposed project changes.

The three additional EBRPD-suggested mitigation measures are responded to individually below:

Forego portions of the project in the most visually sensitive areas: The proposed project development plan (Figure 8) already includes preservation of 3,008 acres (approximately 4.7 square miles, or 70.3 percent) of the 4,277-acre (6.7-square-mile) project site as permanent open space. The preserved areas already include some of the most visually sensitive areas of the site, including the Marsh Creek corridor and Briones Valley portions, and include the majority of the area shown on Draft EIR Figure 69 as visible from high trail points within Round Valley Regional Park, which adjoins the southwestern corner of the site. In addition, in the Draft EIR Alternatives section, Alternative C, the "Mitigated Alternative," eliminates or relocates development in some of the most visually and environmentally sensitive portions of the site. No additional EIR measures are necessary in this regard.

Eliminate larger cuts and fills. The proposed establishment of more stringent hillside development standards, as already described under *Mitigations V-2, V-3, V-4, V-5, V-6, V-7, V-8, and V-9*, specifically includes "standards that promote preservation of significant land forms or hilltops---grading limitations on steep slopes, contour grading..." In addition, the Soils and Geology section of the EIR under *Mitigation SG-1, Grading Limitations* calls for minimizing grading in landslide-prone hillsides, existing landslide areas, and erosion prone slopes and valleys. This combination of grading and, especially, visual limitations, is considered reasonable and sufficient with respect to reducing the project contribution to the cumulative impacts of East County urbanization on views from these two regional parks. No additional mitigation is necessary.

Acquire additional open space lands or easement. Section IV.G, Biological Resources, of the EIR identifies acquisition/preservation of additional open space lands as a possible mitigation for project impacts on San Joaquin kit fox habitat (see *Mitigation BR-8*).

- 43.37 Comment noted. No Draft EIR revision is necessary.
- 43.38 The discussion on page IV.J--51 of the Draft EIR already describes the requirement for trail design compliance with EBRPD trail design standards. The request to include the EBRPD as part of the County's review of the Marsh Creek Trail design is acknowledged. This comment is not related to the adequacy or the completeness of the Draft EIR. Rather, it is related to the implementation of a mitigation measures. The county could consider including the EBRPD as part of the review as suggested in this comment. This suggestion will be considered by the County as part of the decision on the project.
- 43.39 The February 3, 1993 East Bay Regional Park District (EBRPD) letter contains comments on the Notice of Preparation (NOP) and Initial Study on the project. The commenter has indicated that these comments are incorporated by reference into the EBRPD comments on the Draft EIR, but that changes have occurred in EBRPD facilities in eastern Contra Costa County since the time that the NOP was circulated (see Comment 43.01). The concerns raised in the 1993 letter (i.e., project impacts on San Joaquin kit fox and Round Valley to Big Break Trail; and onsite open space configuration, buffer zones, access, compatibility with adjacent uses, water sources, and funding mechanisms; and potential health and safety impacts associated with an existing onsite sand mine, are addressed in the Draft EIR and in the responses to Comments 43.12, 43.13, 43.18 through 43.23, 43.25 through 43.31, and 43.38. Some aspects of the onsite open space dedication (e.g., precise configuration, access, and funding mechanisms) would require future coordination (at a later stage in the development review process) among the County, applicant, and public agency (e.g., EBRPD) to receive the dedication.

44. Rick Gilmore, General Manager, Byron Bethany Irrigation District; January 4, 1997

- 44.01 Comment acknowledged. The comment notes the existence of an irrevocable agreement by BBID to supply the Cowell Ranch property with up to 3,900 acre-feet of water annually. A sentence has been added to the text of the EIR to reflect the existence of the irrevocable agreement between Cowell Ranch and BBID. (See section IV, Revisions to the Draft EIR (Errata).) The agreement does not raise any significant environmental issues and were not included by the District to raise questions regarding the adequacy of the Draft EIR. As such, no response to the agreement is warranted. This updated text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.
- 44.02 Comment acknowledged. The comment points out that Sphere of Influence boundary changes and annexations only require LAFCO approval, and not approval by DWR as stated in the Draft EIR. The reference to DWR on page IV.F--22 of the Draft EIR has been deleted. (See section IV, Revisions to the Draft EIR (Errata).) This additional (or updated) text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.

45. Dave Stoeffler, P.O. Box 274, Knightsen; January 4, 1997

- 45.01 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Land use	IV.A.4	Yes
Jobs/housing balance	IV.A.4	Yes
Agriculture	IV.B.4	Yes
Traffic	IV.C.4	Yes

46. Karen Hunt, 200 D Park Lake Circle, Walnut Creek; January 5, 1997

- 46.01 See Master Response C, especially items 1, 5, and 8.
- 46.02 See Master Response C, especially items 1 and 5.
- 46.03 With regard to the non-environmental issue of project economic feasibility, please see response to comment 39.27. Any future change in the project which may result in a potentially significant additional environmental impact or mitigation that was not considered in the Draft EIR will require additional environmental (CEQA) review by the lead agency (county or city). There is no provision in the California Environmental Quality Act (CEQA) or in the county's own environmental review guidelines that permits a "variance on the EIR." Any change to the project which would cause an additional adverse impact or mitigation need not considered in the certified EIR would require additional full environmental and public review under CEQA and county environmental review guidelines.
- 46.04 Sewer and gas line extensions necessary to serve the project would be located within common rights-of-way within existing and new public streets and dedicated easements with no anticipated significant adverse impacts on local agricultural activities (see Draft EIR pages IV.F--35 and IV.F--103). Project impacts in the form of conflicts between agricultural and suburban traffic, agricultural odors, etc. are adequately addressed on Draft EIR pages IV.B--22 through IV.B--26. Please see responses to comments 2.30 and 39.08.
- 46.05 Potential project impacts on current agricultural activities between the project northern boundary and the existing urban areas of Brentwood are included within *Impact AG-4* and are described on Draft EIR page IV.B--25, second and third bullets. It should be noted that the City of Brentwood has approved projects that abut the north and northeast boundaries of the project. Please refer to Figure 17 in the Draft EIR which identifies the development projects approved and proposed near Cowell.
- 46.06 The purpose of an EIR is to evaluate and disclose adverse environmental impacts that would occur if the proposed project is approved. As such, an EIR should not draw conclusions about whether a project should be approved. This comment, although not related to the adequacy or completeness of the Draft EIR, may be considered by the County when making a decision on the project.
- 46.07 Comment noted. Please refer to the responses to Comments 39.09 and 84.12.
- 46.08 The purpose of an EIR is to evaluate and disclose adverse environmental impacts that would occur if the proposed project is approved. As such, an EIR should not draw conclusions about whether a project should be approved. This comment, although not related to the adequacy or completeness of the Draft EIR, may be considered by the County when making a decision on the project. The EIR

Alternatives section includes an evaluation of a "No Project" alternative and a development under current general plan entitlements (*Agricultural Land*) (see sections V.A and V.B).

- 46.09 Comment pertains to the economic justification for the project. This is a statement of opinion regarding the proposed project. The comment does not address the adequacy or the completeness of the Draft EIR. The County may consider these statements when making a decision on the proposed project. Public hearings will be held to consider the proposed project after the Final EIR has been published.

It should be noted that it is the County's responsibility to conduct environmental review on proposed projects, and that a fee is charged to the applicant to cover all costs related to considering the project (a funding system used for all planning projects involving private developers). The County's preparation of an EIR should not be construed as support or opposition to a project. For this project, that decision will be made by the County Board of Supervisors following recommendations from the County Planning Commissions.

- 46.10 Comments acknowledged, and are generally consistent with the Draft EIR findings. Please see responses to comments 2.30, 39.08, 58.08 and 74.48.
- 46.11 Alternative B, the no general plan amendment alternative, is a variation on the no project alternative required under CEQA Guidelines Section 15126 (d) (4). This alternative is important for understanding what might be developed onsite if the proposed general plan amendment were not approved. The EIR authors determined that the 16 lots that would be permitted under this alternative would result in less-than-significant impacts on agricultural and biological resources for the reasons described on pages V-7 and -8 of the Draft EIR, and respectfully disagree with the conclusions presented in this comment.

47. Randall Hatch, Community Development Director, City of Clayton; January 6, 1997

- 47.01 Please refer to the response to Comment 2.13 for a discussion of the trip distribution predicted by the travel demand forecasting model.
- 47.02 The comment suggests that achievement of a simple, numerical jobs-housing balance ratio will not assure a corresponding reduction in traffic congestion, and states that academic research has shown that the provision of a self-contained community is required to see such benefits.

As defined by the applicant, one of the "basic objectives" of the Cowell Ranch project is to provide for *"a balance of uses that would work together to support broad human needs as a largely self-contained community within the City of Brentwood"* (see Draft EIR pages III--9 and III--11). The project proposes a mixture of housing at various densities, retail and other commercial uses located in two "village cores," a business park, parks and other community facilities, and open space. The provision of jobs, retail stores and community facilities in an area that would clearly assist in reducing the average vehicular trip length. Mitigations recommended in section IV.A, Land Use, of the Draft EIR would help to ensure that the project develops as a "self-contained community" by requiring measures to ensure affordable housing, coordinated development of jobs and housing opportunities, resident access to onsite jobs and services, and compatibility between onsite residential, commercial, and transportation uses (see *Mitigations LU-3, LU-11, LU-12, LU-14, LU-15, and LU-16*).

Also, see Master Response C, item 1, regarding EIR-identified mechanisms to reasonably ensure maintenance of a jobs/housing balance, and item 2 regarding the issue of a numerical balance.

- 47.03 The trip distribution estimates to which this comment refers are determined by the assumptions inherent in the travel demand forecasting process. Please refer to the response to comment 2.13 for a detailed discussion of the trip distribution methodology.

It should also be noted that Marsh Creek Road has a slow design speed and that the average speed on this road is much slower than anticipated average speed on the State Route 4 Bypass and widened State Route 4. Given the differences in speeds on these facilities, the travel demand forecasting model will assign the majority of traffic to the path with the shorter travel time. The greater the discrepancy in travel time, the greater the difference in model assigned traffic volumes. This may account for what the commenter perceives as "unrealistically low" increases in peak hour traffic on Marsh Creek Road west of Deer Valley Road.

- 47.04 Regarding the suggestion that the issue of self-containment in lieu of a simple numeric housing-jobs balance be reflected in *Mitigation LU-11*, see Master Response C, especially items (5) and (1).
- 47.05 Regarding the issue of whether the substantial job growth projected within the project boundary by the Draft EIR is supportable, given questions of project site competitiveness (access, location) with Brentwood and other competing business centers, see Master Response C, items (8), (5) and (1).
- 47.06 See Master Response C, item 4.
- 47.07 Additional analysis was performed as part of this response to comments for a number of intersections in the Central County area. Traffic volumes for these locations were taken from the Central County model and the project traffic was added appropriately. The results of this analysis are shown in revised Tables 30 and 31 (see section IV, Revisions to the Draft EIR (Errata)). This analysis does not produce any changes to the Draft EIR's conclusions regarding project and cumulative traffic impacts. As indicated in *Mitigation T-1*, applicants for future individual developments on the project site would be required to contribute fair-share funding for off-site intersection improvements. The Draft Action Plan for Central Contra Costa County (July 26, 1994) does not list Traffic Service Objectives (TSOs) that are applicable to signalized intersections. The delay index is used on roadway segments and not on signalized intersections. Please refer to Master Response E, item (3).
- 47.08 Comment acknowledged. The response to Comment 1.18 explains the additional analysis that was performed in response to this comment and other comments regarding intersections in the Central County area. As a result of this analysis, Tables 30 and 31 have been revised (see section IV, Revisions to the Draft EIR (Errata)).
- 47.09 Please refer to the response to Comment 1.20 for a discussion of the methodology of projecting future year roadway improvements for the future year analysis and the availability of funding for these improvements. Please also refer to the response to Comment 9.14 for a discussion of the applicability and calculation of fair share funding. *Mitigation T-1* states that as a condition of approval, each individual future development would need to demonstrate to the satisfaction of the County that measures would be taken to ensure that every roadway component analyzed in the Draft EIR would attain the applicable roadway system performance standard. In addition, *Mitigation LU-1* requires monitoring of employment development on the site, with establishment of building permit quotas to be based on regional traffic conditions, among other factors. Through these measures, the payment of fair share fees (by the project applicant and others) would be required to be linked to actual traffic improvements.
- 47.10 The Draft EIR lists number of specific mitigation measures that will be required by the proposed project.

Mitigation T-1 states that as a condition of approval, each individual future development would need to demonstrate to the satisfaction of the County that measures would be taken to ensure that every roadway component analyzed in the Draft EIR would attain the applicable roadway system performance standard. The two exceptions to this are State Route 4 between Railroad Avenue and the State Route 4 Bypass, and Vasco Road, where significant unavoidable traffic impacts have been identified. These measures would require project contribution of its "fair share" of the cost of the necessary roadway improvements to maintain these performance standards. It is anticipated that these roadway improvement mitigations would be coordinated with affected jurisdictions, such as the City of Clayton. In addition, *Mitigation LU-11* (Draft EIR, page IV.A--61) requires monitoring of employment development on the site, with establishment of building permit quotas to be based on regional traffic conditions, onsite housing characteristics, and other factors.

- 47.11 Comment acknowledged. In response to this comment, additional accident data were gathered and accident rates calculated for the City of Brentwood and for other locations in eastern Contra Costa County (see Tables A and B following the response to Comment 78.31). The standard methodology for computing accident rates was used and the resultant rates were compared with statewide averages. The standard methodology uses the average daily traffic (ADT) and the number of accidents at the intersection to determine the number of accidents per million vehicles. These accident rates are then compared to statewide accident rates for similar intersections (i.e., urban two-lane signalized intersections). Locations that have high accident rates compared to the state average are considered "hot spots" that should be evaluated for potential safety improvements. These data do not suggest any changes to the Draft EIR conclusions regarding project and cumulative traffic impacts, however.
- 47.12 These data do not affect the Draft EIR's conclusions regarding project and cumulative traffic impacts. While pavement conditions on specific portions of Marsh Creek Road may not consistently be considered "excellent," this possibility would not alter the Master EIR's conclusions regarding the project's traffic impacts. Pavement conditions will inevitably change over the build-out period for the project, which extends to the year 2026. Thus, project impacts on pavement conditions must be evaluated on a case-by-case basis for future individual projects on the site.
- 47.13 Since household and job projections from the Association of Bay Area Governments (ABAG) are not available for the year 2026, the EIR urban economics consultant, Recht-Hausrath Associates, developed projections for areas outside of Contra Costa County. (See response to Comment 11.03.)

For areas in east Contra Costa County, the projected buildout of each area was assumed for the year 2026 (see Draft EIR Tables 20 and 21). This buildout land use was based on adopted local General Plans and was developed in consultation with the Contra Costa County Community Development Department. The buildout

estimates were based on a detailed knowledge of where urban development is planned to occur.

For the year 2010, Projections 94 was used as the analysis series was the latest available upon commencement of the technical work. This series contains projections up to year 2010.

48. Walter MacVittie, Chair, Discovery Bay Municipal Advisory Council; January 7, 1997

48.01 Section IV.C (Transportation) of the Draft EIR documents the projected level of service on relevant roadways, including State Route 4, Byron Highway, Camino Diablo, and Vasco Road, with and without the project for the future years 2010 and 2026. The Draft EIR indicated where deficiencies in level of service are projected to occur and what measures would be needed to mitigate potentially significant impacts.

48.02 The comment points out that groundwater supplies in the project area are limited, experiencing elevated nitrate concentrations and should not be considered as a water source for the Cowell Ranch project until an areawide groundwater study is completed.

Groundwater is not proposed or recognized in the Draft EIR as a potential source of water supply for the project.

48.03 The comment indicates preference for sewer service to be provided by expansion of an existing facility rather than by a new onsite treatment plant within the Cowell Ranch project, due to the potential for generation of odors.

Sewers have been installed within the City of Brentwood to accommodate flows from the Cowell Ranch property, and presently connection to the City's system is preferred. However, should the costs or other impediments make connection to the City's system impractical, an onsite wastewater treatment-reclamation system is feasible and could be considered by the applicant. A detailed project-level EIR would be required before such a plant could be approved by the Regional Water Quality Control Board, and a prominent issue would be the provisions incorporated in the design and operation of the treatment facilities to eliminate potential odor problems. Based on experience with other facilities, it is the opinion of the EIR authors that odors can be adequately controlled to eliminate downwind impacts to the Discovery Bay community.

49. Gregory G. Baatrup, Planning and Development Engineer, Delta Diablo Sanitation District; January 8, 1997

- 49.01 The comment asks for an evaluation of utilizing reclaimed water as a source of non-potable water for the project.

Reclaimed water that meets Title 22 (California Code of Regulations) Reclamation Criteria for unrestricted irrigation uses could be used to meet the "raw" water irrigation demands for the project, which are estimated to amount to approximately 547 acre-feet per year. Unrestricted irrigation requires that the wastewater receive "tertiary" treatment. Presently, the City of Brentwood's wastewater facility is a secondary plant. Whether or not the plant will be upgraded ultimately to produce reclaimed water that could be used by the project to meet golf course and landscape irrigation demands is not known. If the Brentwood plant is converted to a reclamation facility, the Cowell Ranch project would be one possible area for use of the reclaimed water; but it would not be the only use area, and it may not be the most economical use. Other areas located closer to the treatment plant may offer equally or more viable opportunities for reclamation; and, overall, the specific location for reclaimed water use (whether it be the Cowell property or other Brentwood areas) would not change the net effect (i.e., water conservation benefit) to the local water supplies.

If the project were to be served by an onsite wastewater treatment plant, it would clearly make most sense that it be designed to produce tertiary-level effluent for local reclamation within the project area. A preliminary feasibility study was prepared by Swanson Oswald Associates (SOA) for the applicant that demonstrated the feasibility of an Advanced Integrated Wastewater Pond (AIWP) design for the Cowell Ranch site. Other mechanical-types of treatment plant designs are also possible. The preliminary study by SOA demonstrated that the water produced by an onsite wastewater reclamation plant would be sufficient to supply the most of the "raw" irrigation water demand for the proposed golf course and landscaping areas within the project. The SOA study did not consider the use of the reclaimed water for private residential landscaping, which has not been adopted into California Code of Regulations for reclaimed water.

- 49.02 The comment suggests the addition of a mitigation measure that would require the project to obtain reclaimed water from the project itself, the City of Brentwood, or from southeast Antioch.

While the project would have irrigation demands that could be satisfied by reclaimed water, there is no guarantee that a source of reclaimed water would be available to the project. As noted in response to Comment 49.01, even if the reclaimed water is available (e.g., from the Brentwood facility), the golf course/landscape irrigation needs of the project may not be the best/most economical use of the reclaimed water. The EIR authors agree that if an onsite treatment plant is constructed for the Cowell Ranch project (in lieu of sewerage to Brentwood), then the plant should be designed

to produce tertiary reclaimed water for use within the Cowell Ranch project area; *Mitigation PF-6* has been amended accordingly. *Mitigation PF-6* has also been amended to require, if not served by an onsite facility, that the Cowell Ranch project be assessed sewerage fees sufficient to support their fair-share contribution to the development and operation of a wastewater treatment facility that produces reclaimed water for irrigation uses in the general project area. This updated text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.

- 49.03 The comment points out that the project should be required to install dual water pipelines to areas that could potentially be provided reclaimed water for non-potable uses. Appropriate language has been added to the end of *Mitigation PF-2*. (See section IV, Revisions to the Draft EIR (Errata).) This updated text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.
- 49.04 The comment questions the statements in the Draft EIR about the potential expansion capacity of the Ironhouse Sanitary District facilities and alternatives for Brentwood and the Cowell Ranch project if the ISD plant fails to be able to provide the needed capacity.

The expansion of the ISD disposal capacity from its current 2.0 mgd to 20 mgd would also require treatment plant expansion. Page IV.F--32 of the Draft EIR has been revised to note this (see section IV, Revisions to the Draft EIR (Errata)). Such expansion would require engineering and environmental analysis before it could be authorized.

In regard to an alternative to ISD for ultimate wastewater treatment and disposal, options such as onsite wastewater treatment have been identified (see Draft EIR pages IV.F--30 to 32, and response to Comment 49.01). The Cowell Ranch project is not committed to being served by the ISD facility, nor is the City of Brentwood. *Mitigation PF-6* provides for an onsite treatment/reclamation system for Cowell Ranch as an alternative, although connection to the City of Brentwood is presently preferred.

A preliminary feasibility study of an onsite wastewater treatment-reclamation facility to serve the project was completed by Swanson Oswald Associates, and provides sufficient information to conclude that an onsite treatment system is feasible. While such an onsite system is feasible, it is not the preferred option of the applicant. Should an onsite treatment system ultimately be pursued for the project, then a detailed environmental analysis would necessarily be required for approval and permitting, at which time the specific impacts of the wastewater facilities would be addressed and reviewed publicly. The same would apply to the expansion of the Brentwood treatment plant or the Ironhouse Sanitary District facilities, should either of these options be selected.

There is sufficient information from studies done for the applicant (see response to Comment 49.01) and for the City of Brentwood (see Draft EIR pages IV.F--30 to 32) to conclude that there is more than one feasible means of providing sewer service to the Cowell Ranch project. It is not the purpose of this Master EIR to select the preferred sewerage plan, nor is it the role of this Master EIR to identify and evaluate the specific environmental impacts associated with each of the alternatives. These will be subject to detailed, project-level analysis and environmental review. The County and the public will be afforded full opportunity to review the wastewater treatment and disposal plans in accordance with the CEQA process.

With regard to sewer service, this Master EIR concludes that there are several feasible ways of serving the project, including the development of a "stand-alone" onsite wastewater reclamation facility. The final selection of the sewer service option is not within the scope of this Master EIR. However, regardless of the selected option, the development of the wastewater facilities would be subject to detailed, project-level environmental analysis. Therefore, this Master EIR appropriately draws no conclusions on the specific impacts and mitigations that would necessarily be addressed in a subsequent environmental document.

- 49.05 The comment points out that annexation to ISD (or an alternative LAFCO-approved contract arrangement) would be required for the project (as well as the City of Brentwood) to be provided wastewater services from ISD. The Draft EIR text has been modified accordingly. (See section IV, Revisions to the Draft EIR (Errata).) This updated text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.
- 49.06 The comment points out that the Cowell Ranch project could potentially be served by the Delta Diablo Sanitation District or by a new regional wastewater treatment facility that would serve the far east portions of Contra Costa County. Additional information would have to be provided and a study done to assess the feasibility of either of these suggested sewerage options.

**50. Victor Carniglia, Deputy Director Community Development, City of Antioch;
January 8, 1997**

50.01 Please refer to the response to Comment 2.13 for a discussion of the trip distribution predicted by the travel demand forecasting model.

50.02 Please refer to the response to Comment 1.20 for a discussion of the methodology of projecting future year roadway improvements for the future year analysis and the availability of funding for these improvements.

Please refer to the response to Comment 9.14 for a discussion of the methodology to be used in assessing the project's "fair share" of roadway improvements.

This Draft EIR is a "Master EIR." Any specific development applications associated with this project will be required to conform to the appropriate CEQA guidelines for traffic impact analysis.

50.03 The traffic impact study assumes that the State Route 4 widening between Railroad Avenue and the State Route 4 Bypass would be completed by the year 2026 and would serve to mitigate project impacts. In accordance with *Mitigation T-1*, the County would need to condition specific development within Phase I of the project according to progress in completing the roadway improvements, as recommended in the comment. Please note that *Mitigation T-1* requires compliance with applicable roadway system performance standards. In addition, *Mitigation LU-11* requires monitoring of employment development on the site, with establishment of building permit quotas to be based on regional traffic conditions, among other factors. Please refer to Response 30.04 and to Master Response E, item (4), which provides more background on future roadway construction assumptions.

It is expected that traffic impact fees generated by construction of Cowell Ranch would be provided to the East County Regional Fee Program.

50.04 Please refer to the response to Comment 1.17 for a discussion of the number of jobs assumed by the travel demand forecasting model.

Please also refer to the response to Comment 50.03. As noted in the response, *Mitigation T-1* requires compliance with applicable roadway system performance standards. In addition, *Mitigation LU-11* requires monitoring of employment development on the site, with establishment of building permit quotas to be based on regional traffic conditions, among other factors. This measure would address the timing of SR 4 Bypass construction in relation to employment development on the site.

50.05 The proposed project design lists a number of components that are designed to encourage the use of transit to and from the project, including the provision of shuttle

buses and an adequate number of bus stops. These provisions are designed to encourage the provision of transit service from the local transit agencies, especially Tri-Delta Transit. As recommended in *Mitigation T-12*, the project applicant should coordinate the provision of transit service with these transit operators. Additional requirements to guarantee adequate operation of transit services, such as those suggested by the commenter, may be considered as part of *Mitigation T-12*.

- 50.06 Please refer to the response to Comment 30.16 above. The development agreement is discussed at pages III--12 and III--16 of the Draft EIR.
- 50.07 The conceptual SOI depiction on Figure 17 in combination with the corresponding development capacity data for FUA 1 and 2 in Table 9 present a reasonably accurate depiction of anticipated Antioch growth characteristics. In response to this comment, the boundary shown on Figure 17 has been corrected (see errata herein for EIR pages 11-12, Figure 17).

**51. Brian Hunter, Regional Manager, Region 3, State Department of Fish and Game;
January 8, 1997**

- 51.01 The applicant's consultant mapped a smaller portion of the site as blue oak woodland than did the EIR consultant. All portions of the site mapped as blue oak woodland by the applicant's consultant were outside of proposed development areas. The 13.5 acres of the larger area mapped as blue oak woodland by the EIR consultant would be affected by proposed development. The tree replacement plan required by the Draft EIR would mitigate project impacts on 13.5 acres of blue oak woodland. The final habitat management plan should reflect the actual level of impact. Furthermore, actual mitigation requirements will be based on the actual number and acres of trees removed during construction. The required project-specific final *Habitat Management Plan* must be consistent with the EIR, rather than vice versa.
- 51.02 As noted in the Draft EIR (pages IV.G--8 and IV.G--9), some areas identified by Zentner and Zentner as "wet meadow" appear to be inundated during portions of the winter and spring. Such areas also support some plants common to vernal pools. The EIR requires an inventory of such areas for their attributes, including the presence of various species of freshwater shrimp federally listed as threatened or endangered, so that they can be replaced in kind. Such an inventory was conducted by Huffman and Associates for the project applicant during the winter of 1996-97. The results of the surveys conducted by Huffman and Associates confirm the presence of 0.4 acre of vernal pool habitat, of which 0.2 acre would be affected by project development. Designated open space areas of the site provide ample opportunities for the mitigation of impacts to vernal pool habitats of the site. Other wetland habitats of the site that support some vernal pool plant species did not pond water during the wet winter of 1996-97 and are not considered vernal pools. A breakdown of wetland impacts is shown in Table A (see response to Comment 85.84). This table was based on the work completed by Huffman and Associates (June 2, 1997). Mitigation for these impacts can occur in designated open space areas of the study area.
- 51.03 The draft Habitat Management Plan, which includes the draft *Plan for Grasslands*, was available for review at the Contra Costa Community Development Department during the Draft EIR public review period. *Mitigation BR-1* lists the conceptual mitigation measures (i.e., grazing program, range improvements, weed control, and monitoring program) included in the *Plan for Grasslands* (see Draft EIR, page IV.G--32). The Draft EIR requires that the project applicant comply with Section 404 of the Clean Water Act, the California and federal Endangered Species Acts, and Section 1603 of the Fish and Game Code (among other state and federal regulations). Submittal of an application to fill Section 404 wetlands will trigger a Section 7 Consultation with the U.S. Fish and Wildlife Service for potential impacts to vernal pool fairy shrimp and California red-legged frogs. The San Joaquin kit fox and other terrestrial species will probably be addressed under Section 10a of the Endangered Species Act. Therefore, a final HMP that addresses all sensitive species to be

affected by the project will be developed in collaboration and consultation with relevant state and federal agencies. Huffman and Associates, the applicant's consultant, is preparing a detailed draft plan for submittal to state and federal agencies. This document will serve as the HCP for the Section 10a approval process. The Department may review any supporting documents by contacting the Contra Costa County Community Development Department.

- 51.04 Comment acknowledged. Please refer to the response to Comment 51.01. Please note that the Draft EIR (*Mitigation BR-2, "Additional EIR-Recommended Measures,"* pages IV.G--34 and 35) recommends the preparation of a tree replacement plan, monitoring, and contingency measures to ensure survivorship is at least 80 percent of replacement trees planted. In response to this comment, a recommendation for Department of Fish and Game review of the tree replacement plan has been added to the mitigation measure (see section IV, Revisions to the Draft EIR (Errata)).
- 51.05 As noted by the commenter, the valley sink scrub habitat is located within the designated open space of the Briones Valley. This habitat is to be managed for kit fox, seasonal wetlands, vernal pool fairy shrimp, and other plant and wildlife values, as indicated in *Mitigations BR-1, BR-4, BR-8, BR-9, and BR-10*. Management guidelines to be incorporated into the Habitat Management Plan will be developed in consultation with state and federal agencies (including the California Department of Fish and Game). Trails and other recreational facilities within sensitive habitats of the open space preserve would be inconsistent with the goals of the HMP. Thus, implementation of mitigation measures designed to protect other species would also protect the Valley sink scrub.
- 51.06 Please see *Mitigation BR-4 ("Loss of Jurisdictional Waters")*. The last measure recommends consultation as suggested by the commenter.
- 51.07 *Mitigation BR-4* recommends compliance with all laws regulating development in wetlands and other jurisdictional water (see last bulleted item on page IV.G--42 of the Draft EIR). Therefore, the wetland mitigation plan will be subject to approval by the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the California Department of Fish and Game; text has been added to the discussion of *Mitigation BR-4* to clarify this point. The mitigation monitoring program for the project would ensure implementation of *Mitigation BR-4*.
- 51.08 The Draft EIR recognizes the need for preservation and creation where avoidance of sensitive plant populations is not feasible. As shown in Figure 55, populations of both big tarplant and San Joaquin Spearscale are located within areas of project-proposed designated open space, and would therefore be preserved. It is true that the relocation of populations currently found in areas proposed for development is experimental. It is not necessarily true, however, that these plant species currently occupy all suitable habitat on the project site; it is possible that other areas of the site could serve as suitable habitat for these plants. Other factors besides habitat

suitability affect the distribution of plant populations. The Draft EIR recommends that the applicant have a qualified biologist prepare a relocation plan based on the known attributes of the existing populations. Relocation is clearly less desirable than avoidance, but it is one possible means of maintaining these populations at approximately current levels on the project site. The relocation plan should be prepared and implemented prior to project development, so that the success of relocation efforts can be evaluated before the parent populations are eliminated.

51.09 Comment noted. The Draft EIR requires compliance with state and federal law relative to wetlands and endangered species, which in effect, is a requirement for consultation with state and federal agencies. The applicant's consultant is working on the details of various mitigation measures to be included in the final HMP. The wetland mitigation plan will be submitted to the U.S. Army Corps of Engineers in the fall of 1997 as part of a permit application. This will trigger a Section 7 Consultation with the USFWS.

51.10 The primary breeding habitat for the California tiger salamander on the project site consists of stock ponds, which prior to being constructed by the site rancher many years ago were broad swales that provided no breeding habitat. Over time, tiger salamanders began using these stock ponds as breeding habitat on their own. The rancher did not inoculate these ponds with tiger salamanders. The EIR consultant agrees that there would be a temporal loss of breeding habitat as the new ponds become established. There is no reason to believe, however, that over time the new ponds would function differently from the old ones.

Complete avoidance of breeding and aestivation habitat within proposed development areas would require abandonment of the project. The proposed project and *Mitigation BR-10* therefore include actions to maintain much of the project site (including both tiger salamander breeding and aestivation habitat) as open space, improve aestivation habitat for tiger salamanders by encouraging ground squirrel populations, and relocate breeding habitat to the open space preserve. The relocation of breeding habitat should be completed prior to project development, so that the success of relocation efforts can be evaluated before the existing populations have been eliminated.

Mitigation monitoring requirements of the EIR will ensure that these measures will be implemented. Contra Costa County, or its designee, is responsible for ensuring that all mitigation measures are being implemented per the provisions of the AB 3180 and CEQA section 2108.6.

51.11 Comment noted. The Draft EIR (page IV.G--58, *Mitigation BR-12*, last bullet) does, in fact, require consultation with the CDFG with respect to mitigation measures for impacts on burrowing owls.

51.12 Cumulative impacts on biological resources are discussed on pages IV.G--59 through IV.G--60 of the Draft EIR. That evaluation concluded that the project's cumulative

impact would be less-than-significant, because most of the cumulative development would occur on existing agricultural land of limited biotic value, and more biologically sensitive lands in the project vicinity are outside the Urban Limit Line where urban development is not allowed. Other projects in the City of Brentwood lie to the east of the *Urban Limit Line*, where urban development is permitted. Most of these projects involve agricultural lands that are either unsuitable for special status species (including San Joaquin kit fox), or of marginal value for these species. A detailed breakdown of habitat losses for each project was not available, although the losses of some are known. For example, the EIR for the Back Nine at Brentwood Country Club states that the project site is approximately half orchard and half heavily grazed non-native annual grassland, some of which has been used as cropland. This EIR concludes that the habitat values of the site for wildlife are, given its disturbed nature, relatively low. The potential for special status species on the site was considered low. The area around Brentwood was driven by the EIR preparer who could by visual examination see that most projects are proposed for similar agricultural lands.

The applicant for the Cowell Ranch project would be required by the mitigations recommended in this EIR, and by state and federal laws regulating wetlands and endangered species, to manage its open space in such a way that habitat quality would improve over existing conditions, increasing the likelihood that native wildlife, including a number of special status species, would use the site. The project leaves undeveloped those portions of the project site most likely to be used by San Joaquin kit fox for regional movements. It leaves undeveloped those portions of the project site known to be used by populations of other special status plants and animals. Finally, designated open space lands of the project site would be contiguous with other open space lands to the south and west that are either public preserves or private lands west of the urban limit line. For all of these reasons, the EIR has concluded that cumulative impacts from this project would be less-than-significant.

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**52. Robert K. McCleary, Executive Director, Contra Costa Transportation Authority;
January 8, 1997**

- 52.01 Please refer to the response to Comment 1.20 for a discussion of the methodology of projecting future year roadway improvements for the future year analysis and the availability of funding for these improvements.
- 52.02 Comment acknowledged. In response to this comment, section IV.C, Transportation, of the Draft EIR (page IV.C--3) has been revised to include the following paragraphs (see section IV, Revisions to the Draft EIR (Errata)). This additional text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.

(2) Traffic Planning Procedures. To ensure consistency among different transportation analyses, two network definitions have been defined: the Measure C Routes of Regional Significance and the Congestion Management Program (CMP) network.

Measure C defined the Regional Route system to include all portions of the interstate and state highway systems, Ygnacio Valley Road, Treat Boulevard, San Pablo Avenue, San Pablo Dam Road, and Lone Tree Way. Each of the Regional Transportation Planning Committees (WCCTAC, TRANSPLAN, TRANSPAC, and SWAT) may propose additional routes based on specific criteria defined in the Contra Costa Transportation Authority's *Growth Management Program*. A complete description of the Regional Route system for the East County area is contained in the *East County Action Plan*.

The CMP network is a subset of the network of Routes of Regional Significance. In eastern Contra Costa County, the CMP network consists of State Route 4, State Route 160, Kirker Pass Road, and Railroad Avenue south of State Route 4. In the future, the CMP may be updated to include some or all of the other Routes of Regional Significance and incorporate projects and programs defined in the Measure C Action Plans. A complete description of the CMP network is contained in the *1997 Contra Costa Congestion Management Program Update - Planning Committee Review Draft*. This additional text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.

- 52.03 The "V/C Threshold" represents the CCTALOS level of service methodology, a variant of the Circular 212 methodology.
- 52.04 The procedure for selecting which intersections would be analyzed in the traffic impact analysis is described in detail in the Draft EIR on pages IV.C--32 through IV.C--33. The mandated analysis procedures for traffic impact analyses in Contra Costa County require the use of the East County model to identify the intersections to which 50 or

more project-related trips would be assigned in the PM peak hour. These procedures were used in the selection of study intersections.

- 52.05 In general, the different number of intersections in each study year is a result of a changing roadway network. In a comprehensive screening process, 69 intersections were selected to determine if, in the worst case scenario, the proposed project would contribute more than 50 trips in the AM or PM peak hour. Independently from this process, existing conditions at 18 intersections were analyzed.

The final level of service analysis for the study intersections is shown in Tables 28 and 29 of the Draft EIR. For the Year 2010 analysis, 52 intersections (41 primary and 11 secondary) were analyzed. For the Year 2026 analysis, 63 intersections (50 primary and 13 secondary) were analyzed. The difference in the number of intersections analyzed in each study year is solely due to the changes in roadway configurations assumed in the two scenarios; Phase II of the project would create intersections that would not exist in the year 2010, and the assumed interchanges along the State Route 4 Bypass would also create additional intersections.

- 52.06 Comment acknowledged. The difference between primary and secondary intersections is discussed on page IV.C--33 of the Draft EIR. In response to this comment, definitions of "Primary Locations" and "Secondary Locations" have been added to Tables 28 and 29 (see section IV, Revisions to the Draft EIR (Errata)). This additional text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.
- 52.07 Comment acknowledged. The third sentence of the first paragraph of Page IV.C-24 of the Draft EIR has been revised in response to this comment (see section IV, Revisions to the Draft EIR (Errata)). The land use analysis program is a required element of the CMP. This updated text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.
- 52.08 Please refer to the response to Comment 47.13 for a discussion of how the land use assumptions for the Year 2026 traffic analysis were developed.
- 52.09 Draft EIR Tables 24 and 25 show the breakdown of project traffic by region as well as by inbound versus outbound trips.
- 52.10 It is not unreasonable to expect shifts in traffic between alternatives on a congested network. One cause is a shift in work trip patterns of East County residents who, with project development, would now commute to jobs in the East County area, rather than in central Contra Costa County or other points to the west. Shifting travel paths would reduce the traffic along the specific commute corridors such as State Route 4 Bypass and Kirker Pass Road/Ygnacio Valley Road. Thus, a decrease in traffic as a result of the project is quite possible.

- 52.11 It is assumed that the comment refers to the requirement of TSOs as mentioned in the Measure C implementation guidelines. The analysis of TSOs was performed as part of the response to comments. The results of this analysis are included in Appendix A. The TSO evaluation does not affect the Draft EIR's conclusions regarding project and cumulative traffic impacts.
- 52.12 Comment acknowledged. In response to this comment, additional analysis was performed to conform with the Countywide Transportation Plan. The project's relationship to traffic service objectives (TSOs) has been evaluated, and the results are included in Appendix A of this response-to-comments document. The TSO evaluation does not affect the Draft EIR's conclusions regarding project and cumulative traffic impacts.

53. Barbara Neustadter, TRANSPAC Manager, TRANSPAC; January 8, 1997

53.01 Please refer to the response to Comment 47.13 for a discussion of how the land use assumptions for the Year 2026 analysis were developed, and to the responses to Comments 71.01 and 71.02 for discussion of Metropolitan Transportation Commission (MTC) comments on the Land Use Assumptions.

53.02 Figure 33 shows the study intersections for the Draft EIR. The intersections of Kirker Pass Road/Buchanan Bypass, Kirker Pass Road/Concord Boulevard, Kirker Pass Road/Clayton Road, and Ygnacio Valley Road/Alberta Way were analyzed in the Draft EIR.

Additional analysis was performed as part of this response to comments for a number of intersections in the Central County area. Traffic volumes for these locations were taken from the Central County model and the project traffic was added appropriately. The results of this analysis are shown in revised Tables 30 and 31 (see section IV, Revisions to the Draft EIR (Errata)). This analysis does not produce any changes to the Draft EIR's conclusions regarding project and cumulative traffic impacts. Please refer to Master Response E, item (3).

53.03 Please refer to the response to Comment 53.02 above.

53.04 The Draft EIR analyzes the intersection of Kirker Pass Road/Buchanan Bypass. The analysis projects a decrease in traffic at this intersection as a result of the project in both analysis years. The reason for this is likely the fact that the additional jobs generated by the project would alter commute patterns in the area.

53.05 The trip distribution estimates for Marsh Creek Road west of Deer Valley Road are determined by the assumptions inherent in the travel demand forecasting process. Please refer to the response to comment 2.13 for a detailed discussion of the trip distribution methodology.

It should also be noted that Marsh Creek Road has a slow design speed and that the average speed on this road is much slower than anticipated average speed on the State Route 4 Bypass and widened State Route 4. Given the differences in speeds on these facilities, the travel demand forecasting model will assign the majority of traffic to the path with the shorter travel time. The greater the discrepancy in travel time, the greater the difference in model assigned traffic volumes. This may account for what the commenter perceives as "questionable" low traffic volumes on Marsh Creek Road west of Deer Valley Road.

53.06 Please refer to the response to Comment 2.13 for a discussion of the trip distribution predicted by the travel demand forecasting model.

- 53.07 Please refer to the response to Comment 1.20 for a discussion of the methodology of projecting future year roadway improvements for the future year analysis and the availability of funding for these improvements.
- 53.08 The comment that TRANSPAC does not support telecommute centers is noted. Telecommuting is mentioned (on page IV.C--58 of the Draft EIR) as one measure that could be used to decrease the amount of traffic generated by the Cowell Ranch project. The discussion also mentions the possibility of wiring each housing unit for electronic communication, as suggested by the comment. However, the traffic impact analysis did not assume any reduction in project trips due to telecommuting.
- 53.09 The Draft EIR (page IV.C--57) states that "*(TDM) measures might take the form of institutional programs, provision of new transit service, or changes to the project site design.*" Contra Costa County (or the City of Brentwood, if the project is annexed to the City) would be responsible for determining appropriate implementation of these measures. The traffic impact analysis did not assume any reduction in project trips due to the use of Transportation Demand Management (see Draft EIR, page IV.C--59).
- 53.10 *Mitigation T-9* calls for review of proposed Y-shaped intersections at the time of submittal of detailed site development plans, with consideration given to eliminating these intersections and replacing them with infrastructure that would effectively handle the traffic.
- 53.11 Please refer to the response to Comment 42.15. In the event that the project is annexed to the City of Brentwood, the City would be responsible for review and approval of the project's roadway plans. Language has been added to *Mitigation T-10* to clarify this issue. (See section IV, Revisions to the Draft EIR (Errata).)
- 53.12 Please refer to the responses to Comments 53.08 and 53.09. TDM measures are further discussed in *Mitigation T-1*, which also addresses the process for applying these measures to future development proposals. The use of TDM measures would be monitored and enforced through mitigation monitoring programs for the project and associated development approvals, and through the *Employment Development Program (EDP) Progress Reports* recommended in *Mitigation LU-11* (Draft EIR, page IV.A--61).
- 53.13 The proposed project design lists a number of components that are designed to encourage the use of transit to and from the project, including the provision of shuttle buses and an adequate number of bus stops. These provisions are designed to encourage the provision of transit service from the local transit agencies, especially Tri-Delta Transit. More details regarding future transit service on the site are not available at this stage of the development review process. As recommended in *Mitigation T-12*, the project applicant should coordinate the provision of transit service with these transit operators. Additional requirements to guarantee adequate operation

of transit services may be considered as part of *Mitigation T-12*. As indicated in the mitigation measure, if transit service cannot be extended to the site, the unmet demand for this service and associated traffic congestion impacts would represent a significant, unavoidable impact.

- 53.14 See Master Response C, items 1 and 5.
- 53.15 Transit service would be provided by the local provider, Tri-Delta Transit. TDT must (and does) continue to comply with ADA requirements. In response to this comment, *Mitigation T-12* has been expanded to include transportation demand management (TDM) activity.
- 53.16 Comment acknowledged. In response to this comment, the project's relationship to traffic service objectives (TSOs) described in the East County Action Plan has been evaluated, and the results included in Appendix A of this response-to-comments document. The TSO evaluation does not affect the Draft EIR's conclusions regarding project and cumulative traffic impacts.

The comment requesting that the Board of Supervisors deny a project of this size that requires a change to the *Urban Limit Line* is noted. This comment does not address the adequacy or completeness of the Draft EIR, but is a statement of opinion about the proposed project. The County may consider this comment when making a decision on the project. Public hearings will be held after the publication of the Final EIR.

**54. John Templeton, Associate Transportation Engineer, City of Concord;
January 9, 1997**

- 54.01 Figure 33 shows the study intersections for the Draft EIR. The intersections of Kirker Pass Road/Buchanan Bypass, Kirker Pass Road/Concord Boulevard, Kirker Pass Road/Clayton Road, and Ygnacio Valley Road/Alberta Way were analyzed in the Draft EIR.

Additional analysis was performed as part of this response to comments for a number of intersections in the Central County area. Traffic volumes for these locations were taken from the Central County model and the project traffic was added appropriately. The results of this analysis are shown in revised Tables 30 and 31 (see section IV, Revisions to the Draft EIR (Errata)). This analysis does not produce any changes to the Draft EIR's conclusions regarding project and cumulative traffic impacts.

- 54.02 Year 2026 land use projections were developed in close consultation with County staff. The East County Traffic Model assumptions for future years were updated to reflect the latest information regarding development potentials in various county opportunity areas (e.g., Discovery Bay, Cypress Corridor, Pittsburg, Antioch, Clayton, Central County). The data also reflected projections by the EIR economics consultant, Recht Hausrath & Associates, of intraregional jobs/housing growth relationships for 2026, based on data from the Association of Bay Area Governments (ABAG), the State Department of Finance, and other sources.

The development of 2026 growth scenarios for East County communities was based generally on General Plan buildout projections. For the cities of Brentwood and Pittsburg, the horizon year for each city's General Plan was 2010. This horizon year assumes the full buildout of each city. Thus, no further growth was assumed between the years 2010 and 2026. Since the household and job estimates in ABAG's Projections 96 are also based in part on local government land use policies such as general plans, any differences between the ABAG projections and those cited in the Draft EIR are due to other differences in forecasting methodology. Such differences in long-range projections are not uncommon. Please refer also to the response to Comment 47.13.

- 54.03 Please refer to Master Response E, item (1) for a discussion of the trip distribution predicted by the travel demand forecasting model.

Zone centroid connectors in each subarea were carefully coded according to normal local traffic access for each zone when the subarea model was validated. Zone centroid connector information is available through the Contra Costa County Community Development Department.

- 54.04 Figure 36 shows the traffic on various roadway segments with and without the project. An increase of 48 trips on a roadway segment between the No Project and With

Project scenarios does not mean that 48 project trips are simply added to the roadway segment because other traffic may be directed away from that road. Also, there would be vehicles from locations other than the "rest of Contra Costa County" that could use Marsh Creek Road. As discussed in the response to Comment 52.10, roadway segment trips may decrease as a result of the project for many reasons.

Tabular results showing data from select link plots on traffic originating from or destined to the project can be found in Tables 24 and 25.

54.05 *Mitigation LU-11* provides for annual monitoring and enforcement of onsite jobs/housing targets, with quotas established based on evaluation of wide range of factors, including regional traffic conditions, the characteristics of onsite housing, and the commutes generated by residents of this housing (see Draft EIR, pages IV.A--61 through IV.A--62 and Master Response C, item 1). As noted by the commenter, further mitigation (e.g., to require all project residents to work onsite and vice-versa) would be unreasonable and possibly unlawful. The travel demand forecasting model does not assume that all project employees would also live onsite; in fact, the model shows that a large portion of the trips to and from Cowell Ranch would be local to the East County area.

54.06 Please refer to the response to Comment 1.20 for a discussion of the methodology of projecting future year roadway improvements for the future year analysis and the availability of funding for these improvements. Traffic scenarios were defined in accordance with CEQA requirements.

The assumption of the project's ability to attract jobs, and the difficulties associated with this assumption, are clearly documented in the Draft EIR. *Mitigation T-1* addresses this issue by requiring future specific development applications to demonstrate compliance with roadway system performance standards. Such balance between residential and employment land uses would be addressed through this performance stand approach.

Please refer to response to Comment 54.05 for a discussion of the issue of project residents working onsite.

55. Ellen Garvey, Air Pollution Control Officer, Bay Area Air Quality Management District; January 13, 1997

- 55.01 The commenter cites/references information that is contained in the Draft EIR. This statement does not address the adequacy or the completeness of the Draft EIR. Accordingly, no further response is necessary.
- 55.02 Please refer to the response to Comment 36.01 for a discussion of commute pattern assumptions that formed the basis for the Draft EIR traffic analysis. The Draft EIR traffic analysis assumes that onsite project jobs would represent new employment, rather than relocated jobs. For traffic analysis purposes, this represents a "worst-case" assumption, since it provides for an overall increase in traffic, rather than diversion of traffic from other areas. Please note that *Mitigation T-12* (Draft EIR, page IV.C--69) recognizes that transit providers may not be able to extend service to the site, and indicates that, if no service is provided, the unmet demand for transit service and associated impacts on traffic congestion would represent a significant, unavoidable impact.
- 55.03 This comment raises concerns that should be considered by the County in its decision regarding approval of the project. Please refer to the response to Comment 74.36 for discussion of project consistency with County General Plan air quality goals and policies. Please refer to section V (Alternatives to the Project) of the Draft EIR (page V--38) for discussion of infill development alternatives.
- 55.04 The Unimin Kellogg Creek Sand Quarry is located east of Longwell Avenue near the southwest corner of the project site. This operation would primarily be a source of particulate matter from screening equipment on the site. This operation would not be expected to affect future residents of the proposed project because of three factors:
1. The Unimin Kellogg Creek Sand Quarry is a relatively small source of emissions. This facility does not appear on the BAAQMD's list of major emitters, and thus has calculated emissions of fewer than 100 pounds per day for all criteria pollutants.
 2. The sand quarry is downwind of the proposed project site. During daylight hours when the sand quarry operates the overwhelming prevailing wind direction is westerly, which would carry any emissions to the east and away from the proposed project site.
 3. The sand quarry is a considerable distance east of the project site. The project is distanced from the sand quarry by a buffer area formed by Old Vasco Road, Longwell Avenue, scattered residences, and Kellogg Creek.

Agricultural operations to the northeast of the project site are located downwind of the project, since the project area has a strong predominance of westerly winds in all

seasons. During the daylight hours of the spring, summer and fall seasons, when agricultural activities mainly occur, winds that would carry dust, smoke or other agricultural emissions toward the project would be very rare. Therefore, the impact of dust from existing or future agricultural activities northeast of the site on the proposed project is considered less-than-significant. Please note that *Impact AG-4* and accompanying *Mitigation AG-4* in the Draft EIR (section IV.B, Agriculture, pages IV.B--25 through IV.B--26) address the possibility of health risks and nuisance complaints (including dust-related problems) due to the juxtaposition of onsite urban uses and offsite agricultural uses.

Also, see second paragraph of Response 65.04 regarding Baird decision.

- 55.05 Comment acknowledged. The statement on page IV.C--1 of the Draft EIR has been revised as suggested by this comment (see section IV, Revisions to the Draft EIR (Errata)). This updated text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.
- 55.06 *Mitigation T-1* is not intended to contain a complete list of all measures that could be enacted in an effort to achieve acceptable performance standards at study roadway segments and intersections. The measures presented in the comment, such as bicycle facilities and shuttle service, would be effective in reducing project vehicular traffic, and could be incorporated into future development proposals for the project site in accordance with *Mitigation T-11*, *Mitigation T-11*, and *Mitigation LU-5*.
- 55.07 Comment noted. Please refer to the response to Comment 55.01 above.

56. Verna Cakebread Kruse, 2736 Courtland Drive, Concord; January 13, 1997

- 56.01 The Draft EIR analyzes traffic congestion and roadway safety, as the commenter suggests (see Draft EIR, pages IV.C--48 through IV.C--69). The analysis identifies roadways (including Deer Valley Road and Marsh Creek Road) that would operate at congested levels of service.
- 56.02 The commenter expresses opposition to the project, stating a general concern that agricultural use of their Marsh Creek Road property will be adversely impacted by the project (vandalism, traffic conflicts, livestock disturbance, impacts on wildlife and endangered birds, general incompatibilities between urban uses and agricultural uses, the need to monitor and protect farm activity (Sheriff's Department demands), and associated costs). The county may consider this statement of opposition when making a decision on the project. The Draft EIR indicates on pages IV.B--25-26 (under *Impact AG-4*) that there would be conflicts between project urban uses and adjacent and nearby agricultural activities, including the types of problems cited in this comment. However, as described on Draft EIR page IV.B--25 and as illustrated on Draft EIR Figures 5, 6, and 8, the areas indicated in the EIR where such conflicts would be significant are along the eastern and northern edges of the project areas substantially removed from the location of the commenter's ranch (two-and-a-half to three miles). Such conflicts would not be expected to reach significant levels at the location of the commenter's farm, which is two-and-a-half to three miles from the closest project urban Planning Area. Similarly, the majority of project traffic would affect roadway segments removed from the Marsh Creek Road approaches to Deer Valley Road. Nevertheless, the mitigation measures identified under *Mitigation AG-3* and *AG-4* would reduce the degree of adverse project impacts on the commenter's agricultural operations. Project police and fire needs and impacts are addressed on Draft EIR pages IV.F--32 through 58.

Although the analysis could not support a finding and there would be a significant adverse environmental impact on the commenter's property, general land use incompatibilities such as the one raised by the commenter will be considered as part of the public hearings on the proposed General Plan Amendment.

- 56.03 This comment asks about the responsibility for flood control (including drainage plans for Briones), wetlands management, and the existence of toxics in an old dumpsite off Concord Avenue.

Flood control is managed by the Contra Costa County Flood Control and Water Conservation District. Please refer to pages IV.E--6 to IV.E--8 of the Draft EIR for a discussion of the drainage and flood control planning for the project area, which includes portions of the Marsh Creek and Kellogg Creek watersheds. *Impacts and Mitigations D-1* through *D-4* address the specific flood-related issues posed by the project. Please refer to the response to Comment 43.13 regarding management of open space lands.

No dumping has been known to occur on the project site in the vicinity of Concord Avenue. Section IV.M (Public Health and Safety) of the Draft EIR addresses potential existing hazardous materials contamination on the project site.

- 56.04 The John Marsh House is owned by the State Department of Parks and Recreation. The Cowell Ranch project application does not specifically address preservation of the house. The Draft EIR addresses the impacts of the project on the John Marsh House on page IV.I-15 and related mitigation measures on page IV.I-16. If the project cannot avoid impacts on the John Marsh House, the project would be required to "...develop and implement an appropriate mitigation program in cooperation with the California Department of Parks and Recreation." Adoption of this mitigation program would be consistent with the County's *Principles and Guidelines* for Cowell Ranch Guideline 4.e, which states that "the development plan for Cowell Ranch should include a comprehensive restoration and development program for the John Marsh Home..." Please refer also to Master Response D regarding the applicant's proposed project changes.
- 56.05 This comment asks about mercury in Marsh Creek Reservoir. The investigation of mercury in the sediments of Marsh Creek Reservoir, as discussed on pages IV.M--17 to IV.M--24 of the Draft EIR, has shown that the concentrations are not generally at a hazardous level; but due to occasional high mercury readings and a known contamination source in the watershed, the reservoir is still considered unsafe for recreation and fishing. With remediation of the source of the mercury (the Mt. Diablo Quicksilver Mine) the mercury levels in the reservoir can be expected to decrease over time. Accordingly, the Draft EIR recommends that the reservoir remain closed to fishing and other recreational uses until the mercury levels are confirmed to be below 0.5 parts per million (ppm).
- 56.06 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Traffic	IV.C.4	Yes
Public services (schools, water service)	IV.F.1 and IV.F.6	Yes

57. Lawrence E. Ferri, Park Superintendent, State Department of Parks and Recreation; January 16, 1997

- 57.01 It is reasonable to expect that the measures identified under *Mitigation PF-17* could be accomplished without a specific plan or development program prepared for the John Marsh House by the State Department of Parks and Recreation. *Mitigation PF-17* includes the following provisions: require the applicant to dedicate a portion of the proposed adjoining community park to the State, as a means of (1) expanding the State park; (2) providing for more efficient design, construction, and maintenance of both the community park and the State park; and (3) compensating the State for the loss of useable park area that would result from the extension of the project's major thoroughfare through the northern portion of the park site. More importantly, as explained by applicant comment 84.01, the project has been redesigned since release of the Draft EIR to realign Cowell Ranch Parkway to avoid the Marsh Creek Home State Park site. As revised, the closest right-of-way would be located across Marsh Creek, 400 feet from the John Marsh Home. The realignment is intended to retain the John Marsh Home in its existing configuration and eliminate any loss of useable park area.
- 57.02 Project impacts on the John Marsh Home State Park, including potentials for impacts on its historical rural setting, visual impacts, noise impacts, and sense of place, are addressed in Draft EIR section IV.A (pages IV.A--47: view, historic site character, traffic, noise); IV.F (park use demands), IV.J (views and visual character), and IV.L (noise). In addition, as explained by applicant comment 84.01, the project has been redesigned since release of the EIR to realign Cowell Ranch Parkway to avoid the Marsh Creek Home State Park site. As revised, the closest right-of-way would be located across Marsh Creek, 400 feet from the John Marsh Home. The realignment is intended to retain the John Marsh Home in its existing configuration and eliminate any loss of useable park area.
- 57.03 Project relationships to and impacts on the John Marsh Home State Park, and associated mitigation needs, are considered and described in both EIR sections IV.J, Visual Factors, and IV.A, Land Use; see Draft EIR pages IV.J--3, para. (4); IV.J--18, para. (3), last bullet; **page IV.J--45 (all three paragraphs)**, page IV.A--20, para d(2); and **pages IV.A--46 through 48 (under Impact LU-7)**. In particular, *Mitigation LU-7* on Draft EIR page IV.A--47 calls for applicant preparation of "specific design studies for the project/state park relationship that...provide for landscape screening along the south side of the proposed major thoroughfare [Cowell Ranch Parkway] to block views from the John Marsh Home State Park." Furthermore, *Mitigation LU-7* also calls for "State Park Department, Contra Costa County, City of Brentwood, and John Marsh Historic Trust, Inc. approval of the specific design studies." In addition, as explained by applicant comment 84.01, the project has been redesigned since release of the EIR to realign Cowell Ranch Parkway to avoid the Marsh Creek Home State Park site.

As revised, the closest right-of-way would be located across Marsh Creek, 400 feet from the John Marsh Home. The realignment is intended to retain the John Marsh Home in its existing configuration and eliminate any loss of useable park area.

- 57.04 These comments regarding project impacts on the John Marsh Home State Park facility are acknowledged. The impacts of the proposed Cowell Parkway alignment on the John Marsh Home State Park facility are adequately described on Draft EIR pages II--6 and 7 (*Impact LU-7*), II--34 (*Impact PF-17*), IV.A--20, IV.A--46 through 48 (*Impact LU-7*), IV.F--61, IV.F--64, and IV.F--70 and 71 (*Impact PF-17*).
- 57.05 The Draft EIR under *Mitigation CR-4a* on page IV.I--16 calls for avoidance of the John Marsh house and its contributory setting, and if avoidance is not feasible to develop an appropriate mitigation program in cooperation with the California Department of Parks and Recreation (the commenter). The mitigation also calls for related compliance with all applicable procedures and requirements of Section 106 of the National Historic Preservation Act. For these jurisdictional compliance requirements, existing federal and state law regulate the handling of cultural resources that may be discovered during project construction, including the earlier Marsh Adobe site, if it is discovered on the Cowell Ranch property. In accordance with the requirements of 36 CFR 800.11, should such a previously unidentified National Register or eligible property be discovered during construction of the project, the Army Corps of Engineers, as the permitting Federal Agency, is required to comply with the provisions of the Archeological and Historic Preservation Act of 1974 by permitting evaluation of the resource and implementing mitigation measures as warranted. These mitigations may include redesign of the project as necessary to avoid such a discovery of the earlier Marsh Adobe site.
- 57.06 The Draft EIR includes mitigation measures (see *Mitigation PF-17*) that adequately reduce impacts of the project on the John Marsh House.
- 57.07 The comment is acknowledged. *Mitigation LU-7* on Draft EIR page IV.A--47 has been revised in response to this comment to delete the Trust as an approving entity. The comment pertains to implementation of a mitigation measure rather than to the adequacy of the Draft EIR. The mitigation measure has been corrected. However, the County could require that the specific design changes described under this mitigation be submitted to the John Marsh Trust for their review and advice prior to an agency decision.

**58. A.B. McNabney, Vice President - Conservation, Mt. Diablo Audubon Society;
January 17, 1997**

- 58.01 The Draft EIR public review is the first phase of the project review. The process ensures that interested organizations, such as the Audubon Society, have all the necessary facts about the project so that they can participate in a more meaningful way. The Audubon Society may, and is encouraged, to participate in the decision through the public hearings which will be held on the General Plan Amendment, rezoning, Preliminary Development Plan, and development agreement.
- 58.02 There is no evidence in the transcript of the public hearing that anyone was prevented from speaking. The transcript for the end of each public hearing, following comments 1.20 and 2.24, indicates that the County officers, Mr. Bragdon and Mr. Zahn, asked if there was anyone else wishing to speak on the matter, and seeing no one, continued or adjourned the public hearing. Following closure of the oral public hearing, the County extended the deadline for submittal of written comments on the Draft EIR to March 19, 1997, to allow more time for interested agencies and individuals to prepare written comments.
- 58.03 The commenter's statement that a change in the Urban Limit Line requires a 4/5ths vote of the Board of Supervisors is correct. The Contra Costa County General Plan sets forth the findings which must be made to approve a change to the adopted Urban Limit Line. Regarding this revision process, and the potential precedent-setting effect of the proposed Urban Limit Line change, please see response to Comment 39.09.
- 58.04 The commenter cites/references information that is contained in the Draft EIR. This statement does not address the adequacy or the completeness of the Draft EIR. Accordingly, no further response is necessary.
- 58.05 The comment cites (reiterates) a Draft EIR finding regarding the village core concept. The commenter cites/references information that is contained in the Draft EIR. This statement does not address the adequacy or the completeness of the Draft EIR. Accordingly, no further response is necessary.
- 58.06 The comment appears to question the acceptability of the Draft EIR mitigation measure (*Mitigations LU-7 and CR-4*) addressing potential project impacts on the John Marsh Home, and in general, expresses opposition to project intrusion into the John Marsh Home State Park. Please see response to Comments 57.03 and 57.04.
- 58.07 The comment objects to the consideration of connecting the project to the City of Brentwood for sewer services, calling instead for the development of a "state of the art" onsite facility. The Draft EIR recognizes that the project cannot be provided sewer services by the City of Brentwood without a significant expansion of the City's existing facilities. An onsite treatment plant is an option noted in the Draft EIR, but it is not the only option available to the project.

- 58.08 Anticipated project impacts on East Contra Costa County agriculture, and associated mitigation recommendations, are discussed on Draft EIR pages IV.B--1 through 26. The Draft EIR concludes that even with implementation of these recommended mitigations, "the project's effect on onsite prime agricultural lands would represent a significant unavoidable impact" (Draft EIR page IV.B--21); that project effects on cumulative prime agricultural soil losses would represent a significant unavoidable impact (Draft EIR page IV.B--22) and that project precedent-setting impacts on nearby agricultural uses would represent a significant unavoidable impact (page IV.B--6).
- 58.09 Comment noted. This comment cites the impact and mitigation conclusions of the Draft EIR. The projected sources of funding for the roadway improvements required as mitigation measures for the proposed project would come primarily from traffic impact fees associated with new development and from federal funding.
- 58.10 The comment does not provide evidence supporting the statement that "inadequate planning leaves pedestrians at risk, if the project is permitted." *Mitigation T-11* requires the project to submit proposed development standards (including locations and configuration of pedestrian and bicycle facilities) to the Contra Costa Public Works Department for review and approval. This measure provides for adequate review of pedestrian facilities.
- 58.11 Comment noted. This comment refers to *Impact T-10* of the Draft EIR. The commenter cites/references information that is contained in the Draft EIR. This statement does not address the adequacy or the completeness of the Draft EIR. Accordingly, no further response is necessary.
- 58.12 The project proposes a number of components that are designed to encourage the use of transit to and from the project, including provision of shuttle buses and an adequate number of bus stops. These provisions are designed to encourage the provision of transit service from the local transit agencies, especially Tri-Delta Transit. As recommended in *Mitigation T-12*, the project applicant should coordinate the provision of transit service with these transit operators. Additional requirements to guarantee adequate operation of transit services may be considered as part of *Mitigation T-12*. As indicated in the mitigation measure, if transit service cannot be extended to the site, the unmet demand for this service and associated traffic congestion impacts would represent a significant, unavoidable impact.
- 58.13 Section IV.D (Soils and Geology) of the Draft EIR identifies 14 potential impacts associated with proposed project grading of onsite slopes and hillsides. Mitigations are recommended to reduce impacts to less-than-significant levels.
- 58.14 The comment questions the ability of the project to be developed without creating flooding problems on Kellogg Creek and Marsh Creek.

The commenter is referred to pages IV.E--16 through 23 of the Draft EIR for the review and analysis of drainage and flooding problems associated with the proposed project. As described in the Draft EIR, the project includes detention basins and changes to Marsh Creek Reservoir that would reduce the runoff flows downstream of the project to levels that are lower than existing conditions. This will not necessarily eliminate all downstream flooding, because the capacity of certain downstream reaches of Kellogg Creek and Marsh Creek is insufficient to contain existing runoff flows. The Draft EIR (in *Mitigations D-2* and *D-3*) calls for the project to participate in the development of flood control improvements in these downstream areas to correct the existing problems.

- 58.15 The comment questions the ability of the project to proceed without having a secure existing water supply established.

Please refer to the response to Comment 19.07, which indicates that the City of Brentwood's current water supply expansion will ultimately provide adequate capacity for the Cowell Ranch project. In addition, as noted in the response to Comment 44.01, an irrevocable agreement exists between Cowell Ranch and the Byron Bethany Irrigation District (BBID) to supply the Cowell Ranch property with up to 3,900 acre-feet of water annually.

- 58.16 Mitigation measure PF-8 on page IV.F--50 of the EIR states that "To fund any project-related, excess ongoing operating costs, the project should form or participate in a CSA or similar type of assessment district or comparable financing program in accordance with Brentwood General Plan Community Facilities Element 1.3.5, which states that *"The City Shall require all new developments to participate in a Capital Improvement Financing Program and shall make the required findings of 17.805 of the Brentwood Zoning Ordinance (Phased Development Plan) so that development projects will not create excess demand for police and fire services."* Ongoing funding for fire protection is addressed under mitigation measure PF-11 on page IV.F--56 of the EIR. Page IV.F-56 addresses the need for the project to bear the costs of fire protection for the project; it states that "A fair share funding mechanism would need to be established to provide adequate fire protection." Two mechanisms are identified as options for funding the costs.

- 58.17 As stated on page IV.F-67, "The project, which would have approximately 13,076 residents at buildout, proposes development of approximately 88 acres of parkland (one community park and four neighborhood parks) plus two village greens (3.2 acres total), substantially exceeding the required parkland standards established by Contra Costa County and the City of Brentwood." As stated on page IV.F-69 of the Draft EIR, under Impact PF-16, the project would have a significant impact on the demand for regional park facilities and the project proposes to offset this impact by providing for possible dedication to a public agency of 3,008 acres of proposed onsite permanent open space land, and by providing right-of-way and a trailhead for the *Round Valley to Big Break Trail*. Mitigation PF-16 on page IV.F-70 would ensure that

open space dedication and right-of-way and trailhead provisions occur. As stated on page IV.F-70 under Impact PF-17, the project residents would also have a significant impact on the demands for state park facilities. Mitigation PF-17 on page IV.F-71 includes measures to reduce the increased demands on state park facilities to a less-than-significant level.

- 58.18 Mitigation PF-18 on pages IV.F-81 and -82 of the Draft EIR adequately identifies conventional school financing mechanisms to cover the costs of providing school facilities for the project.
- 58.19 This comment summarizes the findings of *Impact PF-22* (school siting impacts) on page IV.F-86 of the Draft EIR. The mitigation for *Impact PF-22* is also described on Draft EIR page IV.F--86. The comment does not address the adequacy or completeness of the Draft EIR. Therefore, no further response is necessary.
- 58.20 Many detailed studies of plants and animals inhabiting the ranch's wetlands have been conducted and are available for review with the Contra Costa County Community Development Department. Wetlands have been identified in Figure 54 of the Draft EIR. Special status plants and animals of the site have been identified in Figures 55 and 56. During the winter of 1996-97, the applicant's biological consultant conducted additional surveys for vernal pool fairy shrimp; please refer to the response to Comment 59.08 for discussion of the survey results and their relationship to the impact and mitigation findings of the EIR. The Draft EIR requires compliance with state and federal law relative to wetlands and endangered species which, in effect, is a requirement for consultation with state and federal agencies. The applicant's consultant is working on the details of various mitigation measures to be included in the final HMP. The wetland mitigation plan will be submitted to the U.S. Army Corps of Engineers in the fall of 1997 as part of a permit application. This will trigger a Section 7 Consultation with the USFWS. Please note that the applicant has submitted proposed project revisions to the County that would reduce the affected wetland area to 8.6 acres (Huffman and Associates, June 2, 1997); please refer to Comment 84.01, and the accompanying response, which discuss the proposed project revisions.
- 58.21 Comment noted. Mitigation BR-6 (Draft EIR, pages IV.G--43 through IV.G--44) specifies mitigations for possible losses of San Joaquin Spearscale and Big Tarplant populations on the project site.
- 58.22 Comment noted. *Impact BR-7* (Draft EIR, page IV.G--45) notes that the 67 ordinance-size trees identified include blue oaks and valley oaks.
- 58.23 The EIR has concluded that the project would have a potentially significant impact on the San Joaquin kit fox. This conclusion has not been based on the known presence of San Joaquin kit fox on the project site. There have been no documented sightings of this species on the site. Den surveys and other reconnaissance surveys conducted by LSA Associates failed to locate any sign of kit fox on the site. The EIR's

conclusion has been based on the fact that, kit fox having been observed to the southwest and southeast of the site, their movement through the site cannot be discounted. Therefore, the applicant is being required to set aside and manage nearly 2,700 acres of kit fox habitat as open space. The applicant must also comply with the requirements of the state and federal endangered species acts. Impacts on the San Joaquin kit fox would be mitigated to a less-than-significant level. The applicant would bear the cost of all mitigation measures.

- 58.24 During the winter of 1996-97, the applicant's biological consultant conducted additional surveys for vernal pool fairy shrimp. Please refer to the response to Comment 59.08 for discussion of the survey results and their relationship to the impact and mitigation findings of the EIR.
- 58.25 Comment noted. *Impact BR-10* of the Draft EIR addresses this impact. The commenter references information that is contained in the Draft EIR. This statement does not address the adequacy or the completeness of the Draft EIR. Accordingly, no further response is necessary.
- 58.26 Comment noted. *Impact BR-12* of the Draft EIR addresses this impact. The commenter references information that is contained in the Draft EIR. This statement does not address the adequacy or the completeness of the Draft EIR. Accordingly, no further response is necessary.
- 58.27 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Public services (schools, police, fire service)	IV.F.3, IV.F.4, IV.F.6	Yes
Biological resources (wildlife habitat)	IV.G.4	Yes

Please refer to the preceding responses, which address the commenter's specific concerns.

59. Wayne S. White, Field Supervisor, U.S. Department of the Interior, Fish and Wildlife Service; January 21, 1997

- 59.01a Comment noted. This comment describes the plant and wildlife habitats that currently exists on and in the general vicinity of the project site. Section IV.G (Biological Resources) of the Draft EIR describes these habitats.
- 59.01 This comment raises the issue of biotic impacts associated with flood control measures necessary for project-proposed urban development on the project site. Two types of flood control measures may be necessary: (a) improvements to onsite drainages, and (b) improvements to downstream (offsite) drainages. These two aspects are discussed below.

(a) Onsite Drainage Improvements. As stated on page III--32 of the Draft EIR, the project proposes to collect onsite stormwater runoff into an underground drainage system that would eventually discharge into Marsh Creek, Kellogg Creek, and Dry Creek. Section IV.E (Drainage, Flood Control, and Water Quality) discusses the proposed drainage system in detail. The draft HMP submitted by the project applicant and evaluated in section IV.G, Biological Resources, of the Draft EIR is consistent with and reflects the provisions of the project-proposed drainage plan. The evaluation of project-related biotic impacts in section IV.G of the Draft EIR therefore includes biotic impacts from onsite flood control measures, since the draft HMP provided the basis for the Draft EIR evaluation.

(b) Offsite Drainage Improvements. *Mitigations D-4 and D-6* in section IV.E (Drainage, Flood Control, and Water Quality) of the Draft EIR identify the need for the applicant to develop offsite flood control improvements for Marsh Creek and Dry Creek. The applicant has not yet submitted plans for these improvements, and therefore the biotic impacts of these future improvements cannot be reasonably assessed at this stage. Plans have not been submitted because some improvements will occur before Cowell Ranch is developed. As a result, the extent of the improvements by Cowell will not be known until after the initial improvements are known as explained below.

With respect to the Marsh Creek channel, the SR 4 Bypass alignment includes a creek crossing and modifications to Concord Avenue. The Bypass will bisect Concord. The modifications to Concord Avenue will necessitate changes to the box culvert that could affect the flow within Marsh Creek. The creek crossing and improvements to Concord Avenue are a result of the Bypass and will occur irrespective of the proposed project. The specific improvements associated with the Bypass have not been finalized. As a result, it cannot be determined what additional improvements, if any, will be necessary. If any additional improvements are determined to be necessary in reviewing specific development plan applications, these specific improvements will be considered at that time. If the improvements create a

significant impact that was not analyzed in the Master EIR, further environmental review will be required as set forth in Public Resources Code section 21157.1.

If needed, additional improvements could include elevating adjacent structures above the floodplain and/or minor improvements to the creek channel to improve capacity, stabilization, and erosion control. Channel improvements are subject to review by Contra Costa County. Improvements involving streambed alterations or fill or jurisdictional wetlands will be subject to the State Department of Fish and Game, the U.S. Army Corps of Engineers and the Central Valley Regional Water Quality Control Board.

The conclusion for *Mitigation D-4* has been revised to reflect that additional information will be required at the time of future specific project review, to determine if the impact on Marsh Creek has been mitigated to a less-than-significant level. As such, the impact has been listed as potentially significant and unavoidable.

With respect to Dry Creek, the mitigation flood control improvements could include increasing channel capacity of Dry Creek or the installation of a storm drain pipeline within the Briones Valley Road right-of-way sized for the increased runoff due to development. Improvements will comply with all pertinent regulations of Contra Costa County and the County Flood Control and Water Conservation District.

The impacts will occur within the later stages of Phase II with the development of Planning Areas 1, 2 and 3. The nature of the improvements would be detailed with the Final Development Plan and subdivision maps for those areas.

The conclusion for *Mitigation D-6* has been revised to reflect that additional information will be required at the time of future specific project review, to determine if the impact on Dry Creek has been mitigated to a less-than-significant level. As such, the impact has been listed as potentially significant and unavoidable.

The Contra Costa County Flood Control and Water Conservation District (CCCFC&WCD) routinely sends applications for flood control improvements to the Contra Costa County Community Development Department for environmental review. Language has been added to section III, Project Description (Draft EIR, page III-48) to clarify that plans for offsite flood control improvements represent an "anticipated subsequent project" that will be subject to a separate CEQA-required initial study process. This is acceptable under the Master EIR approach (see revised text on page III--44 of the EIR, in section IV, Revisions to the Draft EIR (Errata)).

- 59.01b Comment noted. This comment describes federal requirements for wetlands mitigation. Please refer to the responses to Comments 59.08 and 59.09 for discussion of the specific, Draft EIR-related concerns raised by the commenter on this issue.

- 59.01c Comment noted. The Draft EIR identifies the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) as responsible agencies, and states that the project must comply with provisions of the state and federal endangered species acts. The Draft EIR has concluded that project impacts on several special status animals would be significant. Mitigation measures are recommended that, if fully implemented, would reduce impacts to less-than-significant levels. As noted in the Draft EIR, the USFWS and the CDFG may require measures in addition to those recommended in the Draft EIR. Impacts and mitigation measures were evaluated in the context of the EIR consultant's knowledge of, and experience with, USFWS and CDFG permitting requirements. These agencies provided the applicant with preliminary guidance at a pre-application meeting in December 1996.
- 59.02 The comment points out that flood control improvements along Kellogg Creek would not be required if not for the project, since the lands that are currently subject to flooding are farmlands. The comment calls for any flood control planning work to be done as part of this EIR.

It is true that the lands along Kellogg Creek that are subject to flooding are primarily rural and used mainly for agriculture (see page IV.E--3 of the Draft EIR). The flooding problems are an existing condition that the County Flood Control District has determined to be in need of correction. The project is not responsible for the existing problems and would not add to the problem. The need for flood control work on Kellogg Creek is unrelated to the project. Please refer also to the response to Comment 59.01 above.

The project proposes to construct two onsite detention basins within the Kellogg Creek watershed to mitigate the increase in runoff due to development so that the peak discharge from the site would be less than the predeveloped peak. The effect of over detaining onsite would be to reduce the potential for downstream flooding that currently exists without the project. Existing and future flow rates for Kellogg Creek, prepared by the Contra Costa County Flood Control and Water Conservation District and the Contra Costa Water District, reflect that the existing downstream flooding condition on Kellogg Creek will be improved by the construction of the Los Vaqueros Reservoir, which will reduce the peak flows from approximately 4,400 cubic feet per second (cfs) to 815 cfs. (Los Vaqueros Draft Stage 2 EIR/EIS SCH 91063072 and Cowell Ranch Infrastructure Report, June 6, 1996, prepared by Carlson, Barbee Gibson.)

In addition to onsite improvements, the applicant will be required to pay Contra Costa County Flood Control fees.

- 59.03 The comment suggests that the runoff from the project would increase downstream bank instability problems and that correction of these problems should be addressed in the EIR.

The Draft EIR correctly states the project would increase the overall volume of runoff, but that peak flows downstream in Marsh Creek would be reduced. For further clarification, *Impact D-2* has been amended to state the following (see section IV, Revisions to the Draft EIR (Errata)):

Impact D-2: Marsh Creek. The project will increase the amount of impervious surfaces and hence the volume of runoff from the Marsh Creek watershed. Detention basins will be utilized to control peak flow rates. However, due to the increased volume of runoff, detention basins will sustain flows that may result in additional erosion and creek bank instability on and downstream of the project site. The erosion and creek bank instability as a result of onsite detention is considered to be a **significant impact** (see Criterion #2 under "3. Significance Criteria" above).

Detention basins may reduce the impact of peak hour floods; however, there may still be potential impacts associated with longer duration of high flows caused by project detention basins. The erosion in a channel over a given time period depends on a range of factors including the type of soil, the type and extent of vegetative cover, the shape of the channel and the velocity of the water moving through the channel. The shape of the channel and the velocity of the water determine the total erosive force applied to the channel. The amount of erosion that results from this force will depend on the make-up of the downstream channel (i.e., type of material) it is applied to and the duration at which the force is applied. The Cowell Ranch detention basins would change both the duration and velocity of the water in downstream channels. Without specific detailed analysis it is not possible to state that as planned the current detention basin would not significantly affect bank instability downstream of the project. There are two techniques for mitigating potential downstream bank instability: (1) adjust the size, storage capacity and/or outflow of the proposed detention basins; or (2) repair and stabilize the banks downstream of the project. The second option would likely require separate environmental review of any proposed bank stabilization projects. Detailed channel erosion analysis can be carried out during the final design phase of the project, at which time the need for adjusting the detention basin specifications or in-place downstream bank stabilization projects may be determined.

In addition, *Mitigation D-2* has been amended to state:

Mitigation D-2: Require the project applicant to analyze the downstream Marsh Creek channel for possible channel erosion impacts and pay the applicable drainage fees for Drainage Area 107 and 108 as determined by the County to fund the project's fair share proportionate cost of improvements to the Marsh Creek watershed. Analysis of channel material, bed slope, channel flow velocity and flow duration may be required. If this analysis demonstrates that the impact will occur, the applicant shall either (1) alter the detention basin design (e.g., by

enlarging the basin, changing the outlet design, etc.), or (2) improve channel areas susceptible to increased erosion due to the project related alterations in flow magnitude and duration. Consistent with the Master EIR approach, more information will be required at the time of a future specific project review to determine if, as expected, the impact has been mitigated to a less-than-significant level. Until the impact has been determined to be adequately mitigated, the project's effect on the downstream Marsh Creek channel would represent a ***significant, unavoidable impact***.

This updated and clarified text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.

- 59.04 The comment suggests that the project would create the need for flood control improvements downstream along Kellogg Creek and that the planning of these flood control improvements should be included as a part of this EIR.

The flooding problems on Kellogg Creek are an existing condition that would be lessened, but not entirely eliminated, by the drainage plan included as part of the proposed Cowell Ranch project. Major reductions in Kellogg Creek peak flow rates will occur as a result of the construction of the Los Vaqueros Dam. This dam will significantly reduce existing flooding occurrence of Kellogg Creek. The dam, combined with discharge reductions planned as part of the Cowell Ranch drainage plan, will considerably reduce existing flooding and erosional problems in Kellogg Creek. At the same time, the Contra Costa County Flood Control District is planning for channel improvements along Kellogg Creek. As part of the contributing watershed area, the Cowell Ranch project would be required to pay its fair share and participate in the ultimate improvement plan developed by the Flood Control District for downstream areas. It is likely that these improvements will be implemented as the area changes from agricultural to residential/commercial land use patterns.

- 59.05 The comment points out that the applicant would be required to prepare flood control improvements plans for Dry Creek, and that these should be available for review and analysis of impacts as part of the EIR.

Comment acknowledged. Flood control improvements for the Dry Creek drainage area include two alternatives: (1) increasing the channel capacity of Dry Creek, or (2) installation of a storm drain pipeline within the Briones Valley Road right-of-way that would be sized for the increased flow resulting from the project. If the first alternative is pursued, it would be subject to additional environmental review, in regard to impacts to the creek channel and habitat conditions. *Mitigation D-6* has been modified accordingly (see section IV, Revisions to the Draft EIR (Errata)). Please refer also to the response to Comment 59.01 above. This updated text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.

- 59.06 It is the intent of the EIR that all oaks be replaced at the replacement ratios required in *Mitigation BR-2*. The Draft EIR has incorporated avoidance into *Mitigation BR-2* by adoption of the applicant-proposed measures. Depending on the size classes of the 67 trees to be affected, the applicant would be obligated to replace a minimum of 201 and a maximum of 335 oak trees. The required 80 percent survival rate ensures that, at the end of five years, between 161 and 268 trees would be remaining, or 240 percent to 400 percent of the total number of trees to be affected. Barrier fencing designed to protect seedlings from rodent damage would not be removed at the end of the five-year monitoring period. The proposed mitigation ratios and five-year monitoring plan are adequate to mitigate impacts to less-than-significant levels. Since the recommended mitigation could result in two to four times more blue oaks becoming established on the site than would be removed for project development, there is no basis for a requirement of a 10:1 replacement rate as suggested by the commenter.

The commenter's rationale for a 15 to 20-year monitoring plan is that young trees could be trampled by livestock or girdled by rodents until they reach 6-10 inches in diameter. As noted above, the recommended mitigation provides for the protection of plantings from livestock and rodents. It is not anticipated that such protection would be dismantled at the conclusion of the five-year monitoring period. Therefore, saplings would be afforded continuing protection from livestock and rodents well after the five-year monitoring period has terminated.

- 59.07 The banks of Marsh Creek downstream of the reservoir are, in places, subject to erosion during high water. Such areas were not mapped as a part of this EIR. Nonetheless, these areas exist, in part due to the spotty occurrence of riparian vegetation along this reach of the creek. Infill plantings, as proposed by the applicant, would stabilize the upper bank. Wherever eroded creek banks occur, additional plantings of riparian shrubs (principally willows) would serve to stabilize the banks and improve overall habitat quality at the same time. The applicant is responsible for identifying areas of Marsh Creek in need of any infill plantings, including eroded banks. All bank stabilization measures that result in temporary disturbance to the bed or bank of Marsh Creek would require the applicant to enter into a Streambed Alteration Agreement with the California Department of Fish and Game according to provisions of Section 1603 of the California Fish and Game Code. Planting techniques, success criteria, etc. should be included in the final HMP. All bank stabilization activities within the bed and bank of the creek will be subject to Section 1603 of the California Fish and Game Code. Therefore, the applicant is required to enter into a Streambed Alteration Agreement with the California Department of Fish and Game.
- 59.08 Impacts on wetlands that support vernal pool fairy shrimp populations, or wetlands that otherwise function like vernal pools, must be mitigated by the creation of replacement wetlands at a 2:1 ratio. Recent surveys completed by Entomological Consulting Services for Huffman and Associates have identified the extent of habitat

occupied by shrimp during the winter of 1996-97. The results of these surveys indicate that less than 0.3 acre of vernal pool habitat actually used by vernal pool shrimp would be affected by the proposed project.

While the combination of measures identified in *Mitigation BR-4* would reduce the impact to a less-than-significant level, the single most effective measure in reducing impacts on sensitive wetlands would be modifications to the project design that result in the avoidance of impacts on wetlands. In response to the Draft EIR, the applicant has redesigned the golf course/residential portion of the project in Planning Areas 31 and 32, such that the number of units has been reduced from 693 to 477 and the golf course layout has been changed (see Comment 84.01). Accordingly, impacts on wetlands identified by Zentner and Zentner have been reduced from 28.5 acres to approximately 10 acres. According to Huffman and Associates, Inc. (June, 1997), redesign of the golf course/residential portion of the project in Planning Areas 31 and 32 has reduced wetland impacts to 8.6 acres.

Impacts on wet meadows should be mitigated at a 1:1 ratio. With the proper hydrologic regime, wet meadow grasses typical of wet meadows of the project site are quick to become established. Thus, the temporal loss of habitat during the establishment period is minimal.

According to *Mitigation BR-4*, all replacement wetlands shall be constructed in areas where the soils and surface and subsurface hydrology are suitable for naturally functioning wetlands of the types to be created. Therefore, the horseshoe bend in Marsh Creek upstream of the reservoir would only be used for purposes of wetland creation if the soils meet the criteria stipulated in the Draft EIR. A wetland mitigation plan is in preparation at this time for submittal to the U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service in the fall of 1997. Both agencies will have an opportunity to review the plans.

- 59.09 Comment acknowledged. While the combination of measures identified in *Mitigation BR-4* would reduce the impact to a less-than-significant level, project redesign has significantly reduced the amount of wetland habitat affected (see response to Comment 59.08 above). Impacts on stock ponds have been reduced by 0.6 acre (Huffman & Associates, June 2, 1997). In response to this comment, the mitigation measures has been revised to recommend that mitigation of stock pond losses be at a 1:1 ratio. Thus, the number of replacement ponds constructed, and their size, must be adjusted to ensure a 1:1 mitigation ratio. The actual acreage of habitat lost and the concomitant mitigation for habitat loss will be adjusted during project construction per the requirements of the permitting agencies. This update is provided for information only; it does not alter the meaning or conclusions presented in the Draft EIR.
- 59.10 Populations of special status plants to be preserved are located within the open space preserve far from proposed urban development. While it is speculative at this time to

indicate where relocated plant populations would be established, it is likely that the proposed onsite open space preserve would provide the best opportunities. If so, the relocated populations would be a long distance from urban development. Trail patterns in open space areas would be directed away from sensitive habitats, including those that harbor populations of special status plants and animals. Exclusionary fencing may be considered if it appears that this type of management would benefit the species.

The intent of the Draft EIR is to require contingency measures that will be implemented, regardless of the magnitude of the failure of the translocation effort. It would be to the applicant's benefit to consult with public and private agencies that have the capability of providing expert guidance in the preparation of a relocation plan.

- 59.11 California ground squirrels were virtually eliminated from many areas of eastern Contra Costa County prior to the decade of the 1980s as the result of an aggressive ground squirrel control program. As of the early 1990s the Lone Tree Valley (to the north of the Cowell Ranch site) was devoid of California ground squirrels even though the habitat was suitable. Similarly, large areas of the Cowell Ranch site were not occupied by this species as recently as 1996. The scarcity of ground squirrels is almost surely the result of many years of eradication efforts, and the ground squirrel population has been slow to recover.

LSA Associates performed a reconnaissance survey for potential San Joaquin kit fox den sites in the spring of 1994. Of the 35 sites identified, 29 sites were ground squirrel burrow complexes, indicating a density of one complex per 120 acres. Similar grassland habitats throughout the Bay Area and western San Joaquin Valley support much higher densities of ground squirrels than observed at Cowell Ranch by LSA Associates, H.T. Harvey and Associates, and Hartesveldt Ecological Consulting Services (the EIR biology consultant). Therefore, it is very unlikely that the small ground squirrel population of the site can be attributed to its habitats being at carrying capacity.

Of the 16 ground squirrel complexes found on the eastern portion of the Cowell Ranch, only eight appear to be directly threatened with destruction from development. The other eight complexes would remain in open space areas that lie between development and would be accessible to kit fox and other wildlife that utilize ground squirrels as prey.

A number of other proposed range management practices, in addition to the elimination of rodenticide use, would certainly favor increased California ground squirrel populations within the open space areas. These practices include maintaining optimum ground cover by managing grazing pressure and management of noxious weeds (see *Mitigation BR-1*, Draft EIR, page IV.G--32). The recommended program to reduce the local population of coyote and red fox may also result in increases in

ground squirrel population. Excavation of new stock ponds should also make the open space areas more suitable for California Ground squirrel by creating disturbed soils that are easier to excavate than the surrounding substrate. These measures should fully mitigate the loss of California ground squirrel burrows within the developed areas. The status of ground squirrel populations within the designated open space should be monitored occasionally to determine if the increase in ground squirrel population is adequate to offset losses to development.

- 59.12 The Draft EIR does not present the possible closure of Marsh Creek Road as mitigation for impacts to kit fox; this closure is discussed as a project impact under *Impact BR-8* (Draft EIR, page IV.G--47). Other measures have been recommended to reduce kit fox mortality from automobile traffic. These measures include road undercrossings and directional fencing along all roads that cross wildlife movement corridors linking open space areas.
- 59.13 Comment noted. For purposes of the Draft EIR, the 2,716 acres of proposed onsite open space is considered suitable kit fox habitat. This acreage calculation assumes that the golf course and isolated open space areas are not suitable for San Joaquin kit fox (see Figure 57, page IV.G--29). The EIR consultant team biologists disagree with the commenter's conclusion that the open space and wildlife corridors in the proposed East Hills, East Village, West Creek Village, North Village, and North Hills subareas cannot serve as kit fox habitat. There are numerous documented occurrences of kit fox living in close proximity to urban development in the southern portion of its range (Hansen, 1988; Morell, 1975; Jensen, 1972).

Wildlife corridors should be considered in two contexts: major corridors that provide a wide reach of contiguous habitat, and migration corridors that provide opportunities for movement between isolated habitat areas. The Cowell Ranch project would provide both type of corridors. By dedicating over 2,700 acres of the Briones Valley as permanent open space, the project would contribute to an essential component of a major north-south corridor between the Low Vaqueros Reservoir, Round Valley Regional Park, and Black Diamond Mines Regional Preserve. The project design also provides local movement corridors that are at least 300 feet in width and provide linkages to larger open space areas within the project site. These movement corridors extend to the eastern boundary of the property and provide linkages to the valley floor along natural drainages. Providing a major east-west corridor is unwarranted, since there are no confirmed sightings of San Joaquin kit fox east of the project site and most of the land is developed to agricultural and urban uses.

The open space north of the North Hills subarea presently lies adjacent to extensive open space areas to the north and west of Briones Valley Road. Briones Valley Road is presently closed to public use and does not present a barrier to wildlife movement. This area is deemed to be viable open space since CEQA only requires analysis of the existing condition. A large area of open space lies between the Marsh Creek Reservoir and the East Village that creates a wide corridor eastward to the SR 4

Bypass. The open space area extends to a drainageway that delineates the northern boundary of the Cowell Ranch property. An undercrossing of the SR 4 bypass at this point will connect the open space to a narrow, but functional, corridor that extends eastward through what is presently agricultural land. At the present time the East Creekside subarea is a cultivated orchard that provides marginal habitat for San Joaquin kit fox; it is unlikely that kit fox presently use this portion of the Cowell Ranch as a movement corridor. This open space corridor also connects with the Marsh Creek riparian corridor, which would permit wildlife movement to the north of Cowell Ranch.

The Draft EIR (page IV.G--51) makes clear that the amount of compensatory habitat recommended by the EIR does not necessarily reflect the requirements of the USFWS or the California Department of Fish and Game. The amount of compensatory habitat ultimately required will be determined during a 10a Consultation with the USFWS.

- 59.14 Please refer to the response to Comment 43.01. The presence of unleashed dogs in the dedicated open space on the project site could affect kit fox use of those lands. The EIR requires that leash laws be strictly enforced (see *Mitigation BR-8*, Draft EIR page IV.G--48). An enforcement mechanism would be required, whether dogs, or just unleashed dogs, are prohibited.

Implicit throughout all the mitigation measures of the EIR is the requirement that the applicant develop the administrative structure necessary to implement all of the mitigation measures and manage the open space preserve according to the provisions of the final habitat management plan and the EIR. The applicant would be unable to comply with any of the mitigation measures without this administrative structure. Various options are being considered. Included among them is the transfer of the open space lands to a public agency or private trust organization, or the administration of the lands by the Cowell Foundation or by a homeowner's association. Whoever eventually assumes responsibility for the management of the open space reserve, must ensure that all provisions of the habitat management plan (and the EIR), including the enforcement of leash laws, are implemented. Contra Costa County, or its designee, is responsible for ensuring that all mitigation measures are implemented in accordance with the provisions of the AB 3180 and CEQA Section 2108.6.

The comment regarding red fox population control is noted. The Habitat Management Plan should also consider a management program to reduce coyote populations as well; this recommendation has been added to *Mitigation BR-8* (see section IV, Revisions to Draft EIR (Errata). This is a clarification of *Mitigation BR-8* that does not alter the meaning or conclusions regarding environmental impacts as presented in the Draft EIR. Coyotes are abundant in this region and were observed frequently during field surveys of the Cowell Ranch. Five of the six San Joaquin kit fox studied by Hall (1983) were killed by coyotes.

Mitigation BR-1 requires monitoring of grazing practices and other proposed mitigation measures as requested by the commenter.

59.15 Comment noted. Please refer to the response to Comment 59.13.

59.16 LSA Associates performed a reconnaissance survey for potential San Joaquin kit fox den sites in the spring of 1994. Of the 35 sites identified, 29 sites were California ground squirrel burrow complexes and only 16 of the complexes were located near potential development areas on the east side of the project site. Only eight of the burrow complexes appear to be directly threatened with destruction from development. The other eight complexes would remain in open space areas that lie between development and would be accessible to kit fox and other wildlife that utilize ground squirrels as prey and their burrows for denning or aestivation.

It is speculative for the commenter to conclude that the dependence of San Joaquin kit fox on California ground squirrel burrows is a limiting factor to kit fox survival and reproduction in the northern part of their range. Available information concerning sightings and population of San Joaquin kit fox in its northern range indicates that it occurs in isolated populations at low numbers. The Hall (1983) and Jones and Stokes (1989) studies indicate a density of less than one family group per 3.8 miles (0.26 per square mile). This density is four to 20 times lower than the density described for numerous studies in the southern portion of their range (one to six foxes per square mile (Buechner, 1989)). This information, combined with data from Hall (1983), indicates that kit foxes weigh more and utilize a larger number of dens in the northern range, and indicates that available habitat probably does not limit the number of kit fox found in the northern range. If available habitat is not a limiting factor to kit fox population, then compensation for temporarily disturbed habitat would not contribute to the continued existence of San Joaquin kit fox in its northern range.

One of the most comprehensive surveys for San Joaquin kit fox in its northern range was performed by Jones and Stokes (1989) for the Los Vaqueros water storage project. Based on their observations, Jones and Stokes (1990) concluded that expansion of the kit fox population into unoccupied suitable habitat was probably limited by the low population density and scattered distribution of the northern population. Available prey base, topography, and den site availability did not appear to limit kit fox abundance and distribution.

One factor that may contribute significantly to the low densities of kit foxes in its northern range is predation by coyotes and red foxes. Coyote predation appears to be the primary source of mortality in both populations (Hall 1983, Berry et al. 1987). Hall found that coyotes caused 80 percent mortality in the family group he studied at the Bethany Wind Farm. It is possible that the predation levels are so high that the northern kit foxes are unable to overcome a reproductive threshold that will result in population growth. Thus, programs to control coyote and red fox predation are a key factor in encouraging growth and sustainability of kit fox populations.

The recommendation for construction of ten artificial den complexes within the designated open space areas in the Draft EIR is designed to temporarily replace lost ground squirrel colonies while the squirrel population in the open space increases in response to management practices called for in the Habitat Management Plan. The artificial den complexes are not specifically designed to serve as natal kit fox dens, since there is no evidence that San Joaquin kit fox is presently using the project site for denning. The artificial dens will, however, provide refuge for foraging kit fox, and may also provide burrow habitat for burrowing owl and aestivation for California tiger salamander. The artificial den complexes may not be required if an increase in California ground squirrel population can be documented in the designated open space areas prior to project construction.

Utilization of artificial dens by San Joaquin kit fox has been documented on a number of occasions in the southern portion of their range. An individual kit fox used buried concrete pipe as a foraging den for over a month at a waste disposal site in Kings County (Uptain, personal communication). In 1996, a pair of foxes reared three young in an artificial den at the Pixley National Wildlife Refuge (Allen, personal communication). This den consisted of a mounded multi-entrance structure with enlarged interior cavities designed to simulate a natural natal den.

- 59.17 Please refer to the responses to Comment 59.07 and 59.08. Impacts on wetlands supporting vernal pool fairy shrimp populations, or wetlands that otherwise function like vernal pools, must be mitigated by the creation of replacement wetlands at a 2:1 ratio. The USFWS will also require that existing habitat for vernal pool fairy shrimp be preserved at a 2:1 ratio. Recent surveys completed for Huffman and Associates (the applicant's biological consultant) have identified the extent of habitat occupied by shrimp during the winter of 1996-97.
- 59.18 Comment acknowledged. The Draft EIR (*Mitigation BR-10*) provides for the preparation of a final HMP that will include detailed measures conceptually described within the draft HMP and the Draft EIR. As indicated in this comment, project development may result in harm to breeding salamanders that utilize stock ponds within those portions of the project site that are proposed for development. Direct harm to individual salamanders would result from the following activities (see discussion of *Impact BR-10* on page IV.G--53 of the Draft EIR): (1) the grading and filling of stock ponds, should such activities occur during the breeding season; and (2) the grading of aestivation habitat during much of the year when tiger salamanders are aestivating in rodent burrows. The EIR has been revised to recommend the following additional measures to minimize harm to tiger salamanders (see section IV, Revisions to the Draft EIR (Errata)):
- replacement breeding habitat proposed in the Draft EIR should be constructed prior to project construction;
 - project construction that would affect existing breeding habitat should not occur during the breeding season (December through May);

- adult salamanders should be collected during one or more breeding seasons prior to project construction within construction impact zones and relocated to the replacement breeding habitat constructed within the open space preserve. Methods of collection (i.e., flashlight searches during the rainy season, directional fencing which concentrates salamanders at collection points, etc.) could be identified in the final HMP.

- 59.19 Habitat considered the most suitable for the California red-legged frog is the pond in which red-legged frogs were observed and portions of Marsh Creek upstream of Marsh Creek Reservoir. With the exception of the one pond in which frogs were found, stock ponds of the site are devoid of vegetation. Many are dry or nearly dry by the end of the summer. Marsh Creek downstream of Marsh Creek Reservoir becomes dry many summers, and emergent vegetation was not observed anywhere along its length during surveys conducted by LSA Associates. While it is impossible to conclude that red-legged frogs never use these other habitats, it seems improbable that they occur in them frequently, or even regularly. Potential impacts to red-legged frog habitat and to red-legged frogs themselves would not be substantial and therefore do not appear to meet the CEQA threshold of significance. Nonetheless, this species has been listed as federally threatened, and the USFWS will have an opportunity to voice its concerns over red-legged frogs during the Section 7 Consultation. Please refer also to the response to Comment 59.01, which addresses biotic impacts associated with flood control measures.
- 59.20 Please refer to the response to Comment 51.12, which discusses the approach to evaluating biological impacts from cumulative development, including development within the City of Brentwood.
- 59.21 This comment expresses agreement with the conclusions regarding the environmentally superior alternative to the proposed project presented on page V-46 of the Draft EIR. The commenter cites/references information that is contained in the Draft EIR. This statement does not address the adequacy or the completeness of the Draft EIR. Accordingly, no further response is necessary.

60. Lorna K. Wallace, Pleasant Hill; January 24, 1997

- 60.01 The comment expresses concerns about the project, based upon impact information in the Draft EIR. The comment does not question the adequacy of the Draft EIR. The County may consider this comment in making its decisions regarding the project.
- 60.02 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Project impacts on local and regional land use pattern:	IV.A.4	Yes
Traffic problems:	IV.C.4	Yes
Fuel:	IV.N.4	Yes
Air pollution:	IV.K.4	Yes

Regarding the cost to taxpayers for new services, see response to Comment 63.07.

61. Mary Ann Hoisington, 959 Hawthorn Drive, Lafayette; January 26, 1997

- 61.01 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Agriculture (prime soils)	IV.B.4	Yes

**62. J. Douglas Adams, Superintendent, Brentwood Union School District;
January 27, 1997**

- 62.01 *Mitigation PF-18* on pages IV.F-81 and -82 of the Draft EIR identifies applicant participation in the existing *East Contra Costa County School Facilities Funding and Mitigation Agreement Program* as one of the possible methods of mitigating project impacts on the BUSD. The final determination regarding whether participation would be required would be clarified in the County's conditions of approval and project findings. As stated under *Mitigation PF-18*, the other option for mitigating project impacts on the BUSD is negotiation of an additional impact fee.
- 62.02 Comment acknowledged. In response to this comment, Table 50 and corresponding text of the Draft EIR (pages IV.F--78 through IV.F--84) have been revised to reflect the possibility that 20 percent of the units in the Multiple Family Residential Low (ML) designation may be developed as single-family units that may generate students at the rates typically assumed by the Brentwood Union School District for single-family units (see section IV, Revisions to the Draft EIR (Errata)). This revision does not alter the meaning or conclusions presented in the Draft EIR. It is important to note that the actual number of students generated by the project may vary slightly depending upon the specific types of units that are ultimately constructed and the characteristics of the households that ultimately occupy the project. However, the findings of the Draft EIR, that the project would have a *significant impact* on the capacity of the Brentwood Unified School District do not change whether 1,113 or 1,157 elementary school students and 485 or 504 middle school students are generated by the project; these differences between the Draft EIR estimates and the revised estimates are relatively minor. Likewise, the associated mitigation measure (*Mitigation PF-18* on page IV.F-81) remains valid for the revised estimates.
- 62.03 Please refer to the response to Comment 62.01. As indicated in Table 51 on page IV.F-80 of the Draft EIR, the project would provide two elementary school sites and one middle school site. Please refer also to the response to Comment 28.02, which discusses conditions to be placed on the project to mitigate school impacts.

63. Gary Zimmerman, Economist; January 27, 1997

- 63.01 CEQA does not require that fiscal impacts be identified in an EIR. Section 15131 of the CEQA Guidelines states that *"Economic or social information may be included in an EIR or may be presented in whatever form the [lead] agency desires,"* but *"Economic or social effects of a project shall not be treated as significant effects on the environment."* Unless an economic or social effect would result in a significant physical environmental change, an EIR is not required to discuss an economic or social impact and *"...the focus of analysis shall be on the physical changes."*

Similarly, there is no requirement that fiscal information related to a mitigation measure be circulated with, or included in, a Draft EIR. This issue is related to the implementation of the mitigation measure. If this mitigation measure is adopted by the Board of Supervisors as part of the decision on the project, it will be included in a mitigation monitoring program to ensure its implementation.

- 63.02 The CEQA Guidelines (section 15364) define "feasible" as *"capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors."* This standard has been used to judge the feasibility of mitigation measures recommended in the Draft EIR.

For each environmental topic area, the Draft EIR identifies a series of "significance criteria" that are used as the basis for determining the significance of project impacts. These criteria are also used to judge whether mitigation measures are sufficient to reduce impacts to a less-than-significant level. For example, in section IV.F (Public Facilities and Services), Contra Costa County and City of Brentwood park standards are used as criteria for determining the significance of project impacts on park and recreation services. *Impact PF-15* identifies proposed onsite parks that fail to meet certain City of Brentwood park standards. The accompanying *Mitigation PF-15* recommends specific revisions to proposed project parks that would achieve compliance with these standards. If implemented, this measure would be sufficient to mitigate the impact to a less-than-significant level, because the project would then comply with the significance criteria, which in this case are the City of Brentwood park standards.

In some cases, where a mitigation measure recommends some form of additional study, performance standards are identified to ensure that the measure will be effective in reducing the impact to a less-than-significant level. For example, in section IV.F (Public Facilities and Services), Contra Costa County Sheriff's Department response times and staffing levels are used as a significance criterion for determining the significance of project impacts on police service; the Draft EIR (pages IV.F--45 through IV.F--46) states that the project would have a significant impact if it would *"(a) cause Sheriff's Department response times for priority 1 or 2 calls to exceed five minutes for 90 percent of all emergency responses...; or (b) prevent the*

Department from meeting the FBI-recommended standard for municipal areas of one sworn officer per 1,000 residents." Based on this criterion, the Draft EIR identifies a potentially significant project impact on Sheriff's Department services (*Impact PF-7*), and recommends as mitigation that the applicant prepare a *Public Services and Facilities Plan* that specifies funding for and phasing of adequate police services and facilities, for review and approval by the Sheriff's Department (*Mitigation PF-7*). In this case, the significance criterion regarding Sheriff's Department response times and staffing levels would serve as the performance standards for the *Public Services and Facilities Plan*, in that the plan must provide for adequate police services and facilities to achieve these standards.

- 63.03 The County General Plan and the City of Brentwood General Plan both include policies addressing the provision of adequate urban services (e.g., water; sewer; fire and police protection; parks and recreation; and flood control/drainage). Neither the Contra Costa County General Plan nor the City of Brentwood General Plan have a policy which specifically states that new development must not create a fiscal burden on existing residents. However, the County and City policies cited above were used as criteria for determining the significance of project public facilities and services impacts; i.e., where the project appeared to be inconsistent with one of these General Plan policies, a significant impact and corresponding mitigation have been identified.
- 63.04 Please refer to the responses to Comments 63.01 and 63.02 above.
- 63.05 See Master Response B regarding the use of future study; deferred mitigation.
- 63.06 It is not the purpose of an EIR to analyze the fiscal impacts of a project (see response to comment 63.01). The purpose of an EIR is to provide objective information describing and analyzing the significant adverse impacts of a project and discuss ways to mitigate or avoid those impacts. Separate fiscal impact studies have been prepared for the Cowell Project and area available for public review by contacting the Contra Costa County Community Development Department.
- 63.07 CEQA does not require that fiscal impacts be identified in an EIR. Section 15131 of the CEQA Guidelines states that "*Economic or social information may be included in an EIR or may be presented in whatever form the [lead] agency desires,*" but "*Economic or social effects of a project shall not be treated as significant effects on the environment.*" Unless an economic or social effect would result in a significant physical environmental change, an EIR is not required to discuss an economic or social impact and "*...the focus of analysis shall be on the physical changes.*" While the EIR does not identify the ongoing costs of operating and staffing fire stations, a police station, emergency medical services, and police protection, PF-8 on page IV.F-11, PF-11 on page IV.F-56 identify mitigation measures to finance excess ongoing and one-time police and fire services and facilities costs.

- 63.08 Please see response to comment 63.03. The separate fiscal analysis information prepared for the project may be considered by County decision makers, and may be cited during public hearings on the project itself.
- 63.09 Please see response to comment 63.06. The fiscal analysis is not part of the environmental impact report prepared for the project; all information submitted by the applicant is available for public review.
- 63.10 Please see response to comment 63.03.
- 63.11 Regarding the adequacy of the Draft EIR references to future studies, please see Master Response B.
- 63.12 The types of required studies needed to mitigate impacts are described in the mitigations recommended in section IV.D, Soils and Geology, of the EIR; please refer to the discussion of *Mitigations SG-1* and *SG-3* through *SG-13* on pages IV.D--29 through IV.D--51 of the Draft EIR. The mitigations are "environmentally sound" in that they will reduce impacts of grading to less-than-significant levels. This conclusion is based on experience with similar projects elsewhere in the county and region. In the opinion of the EIR geotechnical consultants, the recommended mitigations for impacts associated with grading are not unusual, and the associated costs would not be higher than costs for similar projects in the region. The commenter has not provided any evidence to suggest that the measures are not "environmentally sound" or "fiscally possible."

Calculation of County costs associated with repair of landslide damage to County roads and streets in 1997 is outside the scope of this EIR. The comment is not related to the adequacy or completeness of the Draft EIR.

- 63.13 The comment asks about the method for determining the appropriate fees that would be assigned to the project for downstream flood control improvements on Kellogg Creek.

The establishment of drainage area fees is a responsibility of the Contra Costa County Flood Control and Water Conservation District. No assumptions were made in the Draft EIR as to what the appropriate fees should be. Other than recognizing that the Cowell Ranch project would be required to participate in the payment of fees, the fees are not an EIR issue. There is an existing administrative structure and procedures in place to handle this matter.

- 63.14 Please refer to the response to Comment 63.01.
- 63.15 Please refer to the response to Comment 63.01.

- 63.16 The comment asks about the financial responsibilities and liabilities associated with an onsite wastewater treatment facility.

If an onsite wastewater treatment facility were to be constructed, a public entity would be responsible for ownership of the facility and, as such, would be financially and legally responsible for the ongoing operations and any associated problems. The degree to which design engineers or contractors would be liable for any future system problems would depend upon specific problems and circumstances. No operating budget can be supplied at this time and this is not an EIR issue. The revenues for operating the treatment facilities would come largely from user fees (or property taxes) from the properties within the area served by the treatment plant.

- 63.17 Potential funding mechanisms for services and infrastructure are discussed in the mitigation measures contained in section IV.F of the Draft EIR. Also, please refer to the response to Comment 63.01.
- 63.18 Please refer to the response to Comment 63.01.
- 63.19 The Draft EIR includes no fiscal analysis; a separate fiscal analysis has been prepared; see responses to Comments 63.03 and 63.06. The project population and population per household data were derived from the *East County Travel Model Land Use Data Base* and from data provided by Linda Moulton, Demographer, Contra Costa County Community Development Department, based on extensive experience with recent county development trends.
- 63.20 As indicated on page IV.F-79 of the Draft EIR, the student yield factors were provided by the school districts. Please refer also to the response to Comment 62.02.
- 63.21 Please refer to the response to comment 63.07, above.

64. Jim Blickenstaff, Director, Preserve Area Ridgeland Committee; January 28, 1997

- 64.01 The amount of compensatory habitat required for San Joaquin kit fox in the Draft EIR was calculated using U.S. Fish and Wildlife Service (USFWS) mitigation ratios in effect at the time the Draft EIR was written. Mitigation ratios have not changed appreciably from those shown in the Draft EIR. It is important to note that mitigation ratios vary somewhat from site to site and that the final mitigation requirements will be the result of negotiations between the applicant and the USFWS.

There is considerable precedence for the acquisition and preservation of compensatory habitat already occupied by the listed species to be affected by a project. The commenter correctly states that the applicant will need to consult extensively with the USFWS with respect to kit fox mitigation. Existing onsite habitat would, however, be part of the mitigation package negotiated between the applicant and the USFWS.

- 64.02 The project's consistency with the County General Plan (including Measure C) will also be discussed during the public hearings held on the proposed project.

The Draft EIR includes an adequate Master EIR discussion of potential project physical impacts on topography and viewsheds. Project effects on "hillsides, ridges, ridgetops, etc." are thoroughly addressed in Draft EIR sections IV.D (Soils and Geology) and IV.J (Visual Factors). In particular, see Draft EIR pages IV.J--3 through IV.J--15, and IV.J--17 through IV.J--50.

Also, as stipulated by CEQA Guidelines section 15125(b), the Draft EIR includes a thorough and adequate Master EIR identification of any inconsistencies between the project and applicable general plan policies, including the Contra Costa General Plan. As first explained on Draft EIR page I--7, section E, for each impact topic (e.g., A. Land Use, B. Agriculture, C. Transportation), local plans and policies applicable to that environmental topic area, and related project inconsistencies, are described.

For each environmental topic, applicable local plans and policies, including those of the Contra Costa County General Plan, are incorporated as significance criteria. Where an identified project aspect is determined to be inconsistent with an associated local plan or policy, a significant environmental impact and associated mitigation measures are identified. With respect to the Measure C (the 65/35 initiative), project relationships to this policy are adequately considered on Draft EIR pages IV.A--25, IV.B--4, and IV.B--26.

Measure C does not preclude Board of Supervisors from adopting a Statement of Overriding Considerations for impacts that would not be mitigated to a less-than-significant level if the Board decides to approve the project. In any event, the Draft EIR does not identify a significant unavoidable project impact on "hillsides, ridges,

ridgetops, etc." (see Draft EIR section IV.B, Significant Unavoidable Impacts, pages VI--2 through VI--4).

- 64.03 This comment raises questions that are not related to environmental impacts that would occur if the project were to be approved. As such, no further discussion is warranted.
- 64.04 The comment states that the surrounding communities will suffer either through added taxes or degraded quality of education because the square footage fees fall short of the funds necessary to mitigate school impacts. *Mitigation PF-18* on page IV.F-81 states that the state-mandated school impact fees would most likely not mitigate the associated impact of the project and therefore recommends additional measures required to pay for facilities required for the project.
- 64.05 The analysis performed in the comment assumes that new household transportation improvement contributions accrue only from development fees and sales taxes. Households contribute other funding, such as federal and state fuel taxes. Many sources are available for many of the transportation improvements planned for the East County area.
- 64.06 These economic concerns, although pertinent to consideration of the Cowell Ranch project, are not "environmental" issues under CEQA, i.e., do not constitute physical effects of the project on the environment, and cannot be identified as significant under CEQA (see CEQA Guidelines section 15131). Where it can be clearly determined that economic effects may lead to physical deterioration, then a significant environmental impact can be identified. There is no evidence to support a conclusion that a project-related future over-supply of commercial development or residential development would lead to the physical deterioration of existing commercial or residential development in the project market area, to the extent that such deterioration or "blight" would constitute a significant adverse environmental impact.
- 64.07 Most of this comment is a statement of opinion regarding the proposed project and the project applicant, and does not address the adequacy or the completeness of the Draft EIR. The County may consider these statements when making a decision on the proposed project. Public hearings will be held to consider the proposed project after the Final EIR has been published. The second from the last paragraph of this comment pertains to the need for an alternative site, infill alternative. Such an alternative was considered. Page V-38 of the Draft EIR explains why an infill alternative site would not achieve the basic objectives of the project and was therefore not given further consideration in the EIR.

65. Richard A. Gigliotti, New Business Land Supervisor, PG&E; January 28, 1997

65.01 Project relationships to facilities owned by PG&E are not addressed in the Energy section of the Draft EIR; rather they are addressed in sections IV.A (Land Use; page IV.A--46), IV.J (Visual Factors; page IV.J--53-54) and IV.L (Noise; pages IV.L--24-26). These sections describe project impacts and mitigation responsibilities associated with the PG&E Gas Terminal and Compressor Station, as well as the PG&E electrical transmission lines and natural gas pipeline that traverse the site. These sections were prepared in consultation with PG&E representatives. The Board of Supervisors is the jurisdictional agency with respect to this project and is authorized to make decisions with respect to project buffering and other provisions to address its proximity to the PG&E substation. PG&E will have an opportunity to participate in the public hearing process, and can submit information to the Board on an advisory basis for its consideration in making decisions regarding the project.

65.02 Comment noted. In response to this comment, EIR references to the "PG&E Gas Compression Facility" have been revised to "PG&E Gas Terminal and Compressor Station." (Please refer to section IV, Revisions to the Draft EIR (Errata).)

65.03 The noise, odor, visual impact, and vehicular access concerns raised by the commenter are addressed in this response and in the responses to Comments 65.04 through 65.06 that follow.

Mitigation measures for noise impacts associated with the Brentwood Gas Terminal and Compressor Station are identified in *Mitigations N-4, N-5, N-6, and N-7*. The EIR noise evaluation included a special study of the noise impacts from the gas compressor station on the proposed project development areas. *Mitigations N-4 and N-6* recommend project site plan revisions to incorporate berms, barriers, open space buffers, or less noise-sensitive uses near the station, similar to the recommendations for noise impacts along the SR 4 Bypass (*Mitigation N-1*) cited by this comment. *Mitigations N-4, N-6, and N-7* note the need for applicant cooperation with PG&E to secure funding for station improvements that would reduce noise levels. In some cases, these station improvements would represent the most reasonable, effective, and efficient mitigation for the noise conflicts, and for this reason the Draft EIR recommends this cooperative approach.

65.04 The potential odor impacts of development of lands near the PG&E Gas Terminal and Compressor Station are discussed on page IV.K-16 of the Draft EIR. This impact was judged less-than-significant based on information from PG&E regarding the sporadic nature of the odors and the proposed 200-foot buffer between the facility and the nearest proposed residence.

CEQA does not require a proposed project to mitigate pre-existing conditions that will not be changed by the project. CEQA only requires an analysis of those impacts resulting from the proposed project. As explained by the court in Baird v. Contra

Costa County (1995) 32 Cal.App.4th 1464, to impose upon the project a requirement that it address or mitigate pre-existing impacts, would impose a requirement beyond those stated in CEQA or its guidelines, and is thus prohibited. To address the possibility of noise, odor, or glare from the PG&E facility, however, the proposed project has responded to the pre-existing condition by proposing a minimum 200 foot buffer between development and the facility, as noted above.

- 65.05 Under state law, the Board of Supervisors has jurisdiction over project development review and is the jurisdictional agency authorized to make such decisions on the project. PG&E may provide advisory input during that process which may be considered by County staff and the Board in making decisions on the project. The Draft EIR encourages consultation with PG&E during this process. Also, see response to comment 30.10.
- 65.06 Comment acknowledged. In response to this comment, the following sentence has been added to the EIR after the last sentence of *Mitigation T-4*: "*The Concord Avenue cul-de-sac shall be designed to ensure to County satisfaction that adequate industrial equipment truck access is provided to and from the existing PG&E Gas Terminal and Compressor Station by this or an alternative route.*" PG&E shall be provided the opportunity to comment on the design before it is accepted by the County. (See section IV, Revisions to the Draft EIR (Errata).) The project as proposed includes installation of a cul-de-sac on Concord Avenue.
- 65.07 Since it is unclear whether and what types of natural gas pipeline modifications may be needed onsite in the future, it would be speculative at this point to identify specific impacts and mitigation measures. Pages IV.M-9 and -12, and -13 adequately discuss the pipelines, PG&E restrictions, and the impact and mitigation measure. Page IV.M-9 of the Draft EIR does identify the width of the easements and states that "PG&E imposes specific limitations on what can be placed within these easements. For example, structure, cross-fencing, ponds, or lakes are not permitted."
- 65.08 This comment provides information regarding PG&E easements and California Public Utility regulations for clearance between electrical transmission lines and surrounding objects. This is not a comment on the EIR and therefore, no response is required under CEQA.
- 65.09 The comment is acknowledged. The setting, impact and mitigation information regarding electric and magnetic fields (EMFs) is adequately described on pages IV.M-1 through -9 of the Draft EIR.
- 65.10 Page IV.F--103 adequately identifies the potential project impacts of providing utilities to serve the project. PG&E is a private enterprise; its service is funded by user fees and charges; the associated increase in energy demand is addressed in EIR section IV.N--4 (a significant long-term energy impact is identified under *Impact E-1*). In response to this comment, the description of *Impact E-1* (Long-Term Project Energy

Use Impact) has been revised to include reference to cumulative energy impacts (see errata for page IV.N--4). The revision does not substantially change the related impact finding and mitigation need, and does not affect the adequacy of the Draft EIR.

66. Rebecca Donian, 3513 Camby Road, Antioch; January 29, 1997

- 66.01 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Land use	IV.A.4	Yes
Open space	IV.A.4	Yes
Agriculture	IV.B.4	Yes
Traffic	IV.C.4	Yes
Water quality	IV.E.4	Yes
Biological resources (wildlife habitat)	IV.G.4	Yes
Air quality	IV.K.4	Yes

67. E.S. Pancoast, 443 Verona Avenue, Danville; January 29, 1997

- 67.01 Project impacts on Class I and II agricultural soils are discussed in Draft EIR section IV.B (Agriculture). The County has not adopted a Hillside and Ridgeline Protection Ordinance. Project relationships to adopted plans pertaining to hillsides and ridgelines are described in Draft EIR sections IV.D (Soils and Geology) and IV.J (Visual Factors). Project relationships to adopted policies pertaining to the protection of wetlands are addressed in Draft EIR section IV.G (Biological Resources). Project ecological impacts are also discussed in Draft EIR section IV.G (Biological Resources).
- 67.02 The comment pertains to language in the Principles for Cowell Ranch discussed by the Board of Supervisors. The comment does not pertain to EIR adequacy.
- 67.03 The project is within the City of Brentwood General Plan designated Special Planning Area "J." City concerns and policies regarding preserving its semi-rural character are clearly expressed in the General Plan (see Draft EIR page IV.J--17).
- 67.04 The Principles for Cowell Ranch do not include this language. Project impacts on local public facilities and services are addressed in Draft EIR section IV.F (Public Facilities and Services).
- 67.05 Project employment impacts on local and regional commuting are fully addressed in Draft EIR section IV.C. Transportation. Project economic impacts, including effects on local employment, are important considerations. but to the extent that they do not involve physical effects on the environmental, are not environmental topics (required EIR content) under CEQA. Nevertheless, project employment and other socio-economic impacts are certainly important factors to be considered, separate from the EIR, in the County's deliberations on this project. The subjects of project impacts on the local balance between housing and jobs, associated traffic impacts, and related air quality and noise impacts, are addressed in the Draft EIR (see Draft EIR-identified impacts and mitigations for *LU-11* and *T-1*).
- 67.06 Comment expresses opinion and recommendation of the commenter with respect to project design; does not pertain to Draft EIR adequacy.
- 67.07 Project impacts and mitigation needs pertaining to energy use, including measures to increase energy efficiency, are adequately addressed in Draft EIR section IV.N (Energy).
- 67.08 Comment noted. Mitigation is required where project impacts have been determined to meet the CEQA-defined threshold of significance. Mitigation ratios proposed in the Draft EIR are typical of those required by EIRs in the Bay Area and generally reflect

the requirements, with some exceptions, of state and federal agencies. Final compensation requirements will be determined by the USFWS.

- 67.09 Project employment characteristics and linkages between employment and housing, to the extent that these factors may result in a physical effect on the environment, are adequately addressed in the Draft EIR. Please see responses to comments 2.12, 11.01, 11.03, and 85.176.
- 67.10 The Draft EIR evaluates the impacts of the project on parks based on standards adopted by Contra Costa County and City of Brentwood identified on pages IV.F-66 and -67. The County's standards are: 2.5 acres of neighborhood park and 1.5 acres of community park per 1,000 residents. The County also specifies that neighborhood parks be located in the center of the neighborhood and serve a one-half mile radius. The City's standards are 3.5 acres of neighborhood park and 1.5 acres of community park per 1,000 residents. As stated on page IV.F-67, "The project, which would have approximately 13,076 residents at buildout, proposes development of approximately 88 acres of parkland (one community park and four neighborhood parks) plus two village greens (3.2 acres total), substantially exceeding the required parkland standards established by Contra Costa County and the City of Brentwood."
- 67.11 *Mitigations T-10 and T-11* require that the project's development standards (including road cross sections and proposed bicycle and pedestrian facilities) be submitted to the County for review and approval. The specific circulation and urban design elements of Cowell Parkway and the other project roadways are being developed through applicant consultation with County and City of Brentwood staff, and will be refined further as the development process proceeds. As this occurs, the County will have opportunities to provide input relative to the configuration of Cowell Parkway.
- 67.12 Comment noted. As noted on page IV.C--68 of the Draft EIR, the *Cowell Ranch P-1 Planned Unit District Development Standards* describe a conceptual plan for the provision of transit service within the project. That document refers to possible shuttle buses or demand-responsive vans carrying passengers between the project and destinations such as downtown Brentwood, a proposed commuter rail facility, BART stations, and major employment centers in the surrounding region.
- 67.13 The comment is not related to the adequacy of completeness of the Draft EIR. Rather, the comment pertains to the project design concept. These comments may be considered by the County when making a decision on the project. Public hearings to consider the proposed project will be held after the Final EIR has been published.
- 67.14 Please refer to response to Comment 67.13 above.
- 67.15 Please refer to response to Comment 67.13 above.

- 67.16 The Draft EIR includes a full discussion of project impacts on agricultural soils and associated mitigation measures (see section IV.B.4). Farming on relatively small parcels (1/4 to 1/2 acre suggested by the comment) may serve the needs of an individual family. However, there is no evidence that such a requirement could measurably reduce the impacts on agriculture. Please refer to response 2.35 which discusses additional mitigation measures to further reduce agricultural impacts.
- 67.17 The specific design for each individual park has not yet been determined. While park design is not an issue that needs to be addressed in this EIR under CEQA, there may be an opportunity for one or more of the six proposed neighborhood and/or village center parks (proposed in Planning Areas 16, 24, 34, 43, 54, and 56) to be designed in the manner suggested in this comment: "small neighborhood squares bordered by streets and faced with houses..."
- 67.18 The comment is not related to the adequacy of completeness of the Draft EIR. Rather, the comment pertains to the project design concept. These comments may be considered by the County when making a decision on the project. Public hearings to consider the proposed project will be held after the Final EIR has been published.
- 67.19 The comment points out the need for measures to control the effects of urban runoff pollutants.

The Draft EIR discusses the potential impacts and mitigation measures for urban runoff pollutants on pages IV.E-28 to IV.E-31. Since the completion of the Draft EIR, the project drainage plan has been amended. The plan requires definition of pollutants of concern, their source, and development of best management practices to mitigate the impacts to water quality created by these pollutants of concern. These practices would include storm drain stenciling and the water quality basins proposed, but could also include a variety of other measures including grassy swales, buffer strips, catch basin filters, pervious surfaces for patios, decks and driveways, and other measures. Best management practices are being changed and refined based on their effectiveness all the time, and the method proposed would allow formulation of a tailored plan that matches the geomorphology of the watersheds in question.

The project drainage plan (as amended) includes the installation of three water quality basins (one in conjunction with each of the detention basins). These basins are for the interception and retention of urban runoff pollutants and would satisfy the commenter's request for centralized treatment of urban runoff. The water quality basins have been sized for one-half inch of runoff from the developed areas. Berms and other flow retarding devices would be used to provide adequate settling time between the water quality basin and the detention basins. The proposed size of the basins is as follows:

North Village	28 acre-feet
East Village, South Basin	18 acre-feet
East Village, North Basin	15 acre-feet

- 67.20 The comment asks for creek preservation measures that would maintain a 200-year natural floodplain for vegetation and biota.

The project plan has been developed and the EIR analysis has been made based on maintenance of protection against the 100-year flood conditions, which is in accordance with current County ordinances and practices. The commenter has not provided evidence to support the imposition of a 200-year floodplain-waterway development restriction.

- 67.21 The comment asks for residential structures to be elevated above the 200-year flood level.

The County and Federal requirement for flood protection of residential structures is the 100-year flood level. Changing this criterion to the 200-yr event would require a change in these existing policies and ordinances. The commenter has given no specific reason why this higher standard should be applied to the Cowell Ranch project.

- 67.22 Modifications to the project have been identified in the Draft EIR as mitigation to numerous impacts, including natural resource impacts (see *Mitigation MR-1* and *MR-2* calling for phasing), prime agricultural impacts (see *Mitigation AG-1*, *AG-3*, and *AG-4* which call for redesign of the project) and transportation impacts (*Mitigation T-2*, *T-3*, *T-4*, *T-6*, *T-7*, *T-8* and others that call for redesign of the project). In addition, the "Mitigated Alternative" evaluated in section V, Alternatives to the Project, presents a series of modifications to the project that would assist in reducing the project's impacts on natural resources and traffic conditions. The CEQA Guidelines limit the lead agency's ability to reduce the number of housing units proposed by the project as a means of reducing environmental impacts; CEQA Guidelines section 15092(c) states that "...the public agency shall not reduce the proposed number of housing units as a mitigation measure if it determines that there is another feasible specific mitigation measure available that will provide a comparable level of mitigation."

- 67.23 Offsite mitigation may be necessary to fully mitigate project effects on the San Joaquin kit fox. Such mitigation would not involve the destruction of natural habitats and their replacement with kit fox habitat; rather, it would involve the acquisition of a parcel that already contains suitable kit fox habitat. State and federal regulatory agencies typically require that offsite mitigation habitat be of comparable quality to the habitat being destroyed and that it be located as close to the project site as possible. The parcel would then be managed for kit fox and preserved as kit fox habitat in perpetuity.

67.24 Comment noted. The focus of Draft EIR-recommended measures to mitigate project impacts on biological resources is to provide as much onsite mitigation as is practicable. As discussed in the Draft EIR, the permanent protection and management of more than 2,700 acres of habitat, predominately in the western and southern portions of the project site, would provide an important linkage between the Los Vaqueros watershed, Round Valley Regional Park and Black Diamond Mine Regional Preserve.

67.25 The CEQA Guidelines (section 15126(b)) require EIRs to *"describe significant impacts, including those which can be mitigated but not reduced to a level of insignificance."* In accordance with this requirement, the EIR recommends mitigation measures that could be incorporated into the project to reduce its environmental effects; where no project revisions or other mitigations are available to reduce the effect to a less-than-significant level, the effect is identified as a "significant, unavoidable impact."

Section IV.B (Agriculture) identifies project and cumulative prime agricultural land losses in Contra Costa County as significant, unavoidable impacts (*Impact AG-1* and *Impact AG-2*), if the project cannot be redesigned to avoid urban development on onsite prime agricultural lands. Section IV.E (Drainage, Flood Control, and Water Quality) concludes that the project's impacts on natural drainage systems could be reduced to a less-than-significant level through the mitigation measures identified in the EIR.

As implied by the commenter, County decision-makers will need to consider the various environmental values of the project site and vicinity in reaching a decision regarding whether the project should be approved.

67.26 The comment raises socio-economic rather than environmental issues. Section 15131 of the California Environmental Quality Act Guidelines states that economic or social effects of a project shall not be treated as significant effects on the environment. Thus, they are not addressed in the EIR. However, such socio-economic information may be considered by the County when making a decision on the proposed project. Public hearings will be held to consider the proposed project after the Final EIR has been published.

67.27 This is a statement of opinion regarding the proposed project. The comment does not address the adequacy or the completeness of the Draft EIR. The County may consider these statements when making a decision on the proposed project. Public hearings will be held to consider the proposed project after the Final EIR has been published. The specific issues raised in the comment (housing/jobs balance) are addressed in the Draft EIR, under *Impacts LU-4, LU-11, and T-1*. See Master Response C, items (1), (3), (5) and (8).

- 67.28 The commenter suggests limiting conditions under which an adjustment in the Urban Limit Line shall be allowed. These suggestions may be considered by the County when making a decision on the proposed project. Please see response to related comment 84.12.
- 67.29 Comment noted. The comment suggests ideas regarding what impacts are significant and that the performance standard should be level of service C. Adopted guidelines for traffic impact analysis in Contra Costa County are levels of service C, D or E depending on location (see Draft EIR, pages IV.C--27 through IV.C--29).
- 67.30 Alternative A, the no project alternative, is required under CEQA Guidelines Section 15126(d)(4). Other alternatives that would be feasible are assessed in chapter V of the Draft EIR.
- 67.31 Alternative B, the no general plan amendment alternative, is a variation on the no project alternative required under CEQA Guidelines Section 15126 (d) (4). Other alternatives that would be feasible are assessed in chapter V of the Draft EIR.
- 67.32 This commentary discusses advantages and disadvantages of Alternative C; this comment does not address the adequacy or completeness of the Draft EIR. Accordingly, no further response is necessary.
- 67.33 This commentary discusses alternative sites; this comment does not address the adequacy or completeness of the Draft EIR. Accordingly, no further response is necessary.
- 67.34 Comments pertain to the merits of the project rather than to the adequacy of the Draft EIR. These comments may be considered by the County when making a decision on the project. Public hearings to consider the proposed project will be held after the Final EIR has been published.

68. Seth Adams, Director of Land Programs, Save Mount Diablo; January 30, 1997

- 68.01 Comment noted. The focus of Draft EIR-recommended measures to mitigate project impacts on biological resources is to provide as much onsite mitigation as is practicable. As discussed in the Draft EIR, the permanent protection and management of more than 2,700 acres of habitat, predominately in the western and southern portions of the project site, would provide an important linkage between the Los Vaqueros watershed, Round Valley Regional Park and Black Diamond Mine Regional Preserve.

The EIR preparers are unclear what is meant by the comment that "the standard for mitigation appears to vary throughout the document." The significance criteria presented in each subsection of Draft EIR section IV serve as the standards by which the effectiveness of proposed mitigation is judged. Mitigation requirements will vary among species due to the species' unique habitat needs.

- 68.02 This comment states that the mitigated alternative is preferable to the proposed project. From an environmental standpoint, this comment is acknowledged. The County may consider this comment when making a decision on the project.

69. Fred Beddall, Conservation Representative, Sierra Club (San Francisco Bay Chapter); January 30, 1997

- 69.01 This is a statement of opinion regarding the proposed project. The comment does not address the adequacy or the completeness of the Draft EIR. The County may consider these statements when making a decision on the proposed project. Public hearings will be held to consider the proposed project after the Final EIR has been published.
- 69.02 The commenter cites/references information that is contained in the Draft EIR. This statement does not address the adequacy or the completeness of the Draft EIR. Accordingly, no further response is necessary.
- 69.03 Please compare Figure 38 (Slope Inclinations) of the Draft EIR with Figures 42 and 43, which illustrate representative cut and fill inclinations and thicknesses proposed by the project. As can be seen in the comparison of the slope inclination (i.e., existing condition) map with the proposed cut-and-fill maps, grading (where it would occur) typically would preserve ridgelines and hilltops and, in the opinion of the EIR geotechnical consultant, would generally conform to the site's topography.

The County General Plan contains a policy stating that extensive grading is unsuitable where slopes are steeper than 26 percent. Please note, however, that, based on a Board of Supervisors interpretation, County General Plan policies do not prohibit development on hillsides or slopes over 26 percent (see footnote on Draft EIR page IV.D--45). From a geotechnical engineering standpoint, a 26-percent slope is a comparatively gentle inclination, readily and safely graded with minimal impact when limited to small areas. The applicant's plan includes 23 acres (less than one percent of the 4,900-acre site) of grading proposed where slopes are inclined at 26 percent or steeper. Most of the site (about 3,000 acres) would be dedicated as open space, with grading limited to approximately 1,900 acres of the 4,900-acre site.

- 69.04 Regarding the comment that imposition of the project Planned Unit Development standards on a case-by-case basis "is a very odd and cumbersome process, one that is likely to fail for a variety of reasons," that process (P-1 District Development Standards imposition) represents common practice for cities and counties statewide under current land use law, and represents the basic mechanism by which all development under the County's Planned District zoning is routinely processed. There is certainly adequate assurance, in the form of a demonstrated history and record, that this process, including its planning staff review, transportation staff review, public works and engineering staff review, CEQA review, public review, design review, Planning Commission review, and Board of Supervisors (or City Council) review components, is an acceptable and reasonable process.

The purpose of an EIR is to provide recommendations on a proposed project by way of mitigation measures which will mitigate the significant environmental impacts

identified in the EIR. It is up to the lead agency, in this case, the Board of Supervisors, to adopt, reject or modify those measures. As a result, changes are not generally made to the project applications until after the Board makes a decision on the EIR and project. Specifically with respect to a revised grading plan, if changes are directed to be made to the plan by the Board, it would be standard practice to have those changes reflected in a new grading plan at the time the next subsequent or future project application is requested (such as the final development plan and/or subdivision). If changes are required by the Board, those changes will need to be reflected by way of a revised project application or other document to demonstrate that the change has been made before additional approvals or decisions are made on the project that relates to those changes.

Please also refer to the response to similar Comment 84.123.

- 69.05 Regarding the recommended coordination between commercial development in Brentwood and the project (*Mitigation LU-5*), the term "to the extent possible" is appropriate here since the mitigation measure is advisory rather than mandatory. *Mitigation LU-5* has been revised to be advisory rather than required, since under CEQA Section 15131, economic impacts cannot be treated as significant effects on the environment; see errata herein for pages IV.A--41 and 42. Regarding the types of zoning limitations suggested, the intent is to allow discretion by future city planning officials in adjusting zoning controls in response to cumulative changes in Brentwood market conditions. The City of Brentwood Community Development Director, in response to this same *Mitigation LU-5*, suggests that zoning measures that could be considered here include developing specific lists of permitted uses for the project as part of the P-1 Zoning Book, which would allow project-serving commercial needed by future project residents, but which would reserve larger community, regional, and specialty retail for central Brentwood (see response 78.14). There is reasonable assurance that the required involvement of the City of Brentwood in this zoning refinement process, as called for under *Mitigation LU-5*, would provide reasonable protection against significant economic effects on the viability of existing commercial development in Brentwood. Please also see response to comment 78.15.
- 69.06 Please refer to the response to Comment 2.13 for a discussion of the trip distribution predicted by the travel demand forecasting model.
- 69.07 (1) Full mitigation is recommended in EIR through project redesign. (2) The reference in the impact statement to "feasibility" relates to the Board's ultimate decision with respect to this mitigation measure. (3) The Draft EIR clearly discloses that should the Board find the recommended mitigation measures to be infeasible, that impact would be significant and unavoidable. See response to Comment 39.27.
- 69.08 The proposed project design lists a number of components that are designed to encourage the use of transit to and from the project, including the provision of shuttle buses and an adequate number of bus stops. These provisions are designed to

encourage the provision of transit service from the local transit agencies, especially Tri-Delta Transit. As recommended in *Mitigation T-12*, the project applicant should coordinate the provision of transit service with these transit operators. Additional requirements to guarantee adequate operation of transit services may be considered as part of *Mitigation T-12*. As indicated in the mitigation measure, if transit service cannot be extended to the site, the unmet demand for this service and associated traffic congestion impacts would represent a significant, unavoidable impact. Please refer to the responses to Comments 30.13 and 84.19 for discussion of transit funding.

- 69.09 Comment acknowledged. The comment raises the unresolved questions regarding annexation and possible political, legal and economic obstacles to the provision of water supply to the project, and suggests changing *Impact PF-1* from "potentially significant" to "significant." Please see response 69.08 above, and responses 2.23 and 19.07.

Consistent with the growth management standards contained in the County General Plan (page 4-11), the project applicant will be required to demonstrate that adequate water quantity and water quality can be provided before approval of a subdivision map.

- 69.10 The applicant has submitted a conceptual grading scheme prepared on a topographic base map. These maps are available for review at the Contra Costa County Community Development Department.
- 69.11 In the opinion of the EIR geotechnical consultants, adoption of escrow accounts, performance bonds, or other financial mechanisms for soil failures will not be necessary if the mitigations recommended in the EIR are implemented. An escrow account instrument could be adopted as a risk management tool, but it would not be required as mitigation for impacts identified in section IV.D, Soils and Geology, of the EIR.
- 69.12 Construction activities can result in "take" of California and federally listed threatened and endangered species. The "take" of rare and endangered species is considered a significant impact under CEQA. Furthermore, grading and construction operations in the initial phases of project construction may displace special status wildlife species. Short-term site control measures are necessary to allow wildlife to relocate to adjacent open space.

The long-term impact of 13,000 residents (and their pets) on wildlife species is more complicated. The Draft EIR concludes that the project would have a potentially significant impact on several species of wildlife, and specific mitigation measures have been recommended to address those impacts (e.g., kit fox movements, tiger salamander movements, riparian habitats). However, the EIR does not conclude that the proximity of 13,000 residents to the proposed onsite open space preserve would, by itself, constitute a "significant" environmental effect on all wildlife species. In fact,

there is both anecdotal and scientific evidence that urban development located next to open space habitat has relatively little effect on many native wildlife species occurring there (see: Effects of Urban Encroachment on Wildlife in the Santa Monica Mountains by Sauvajot et al. [1993] in the *Interface Between Ecology and Land Development in California*, J.E. Keeley, ed.). Even after buildout, the open space preserve would continue to provide habitat for small mammals, reptiles, ground-feeding and nesting birds, and other species. Coyotes, bobcats, and raptors of various types would continue to forage on the site. It would be inaccurate to state that 13,000 residents (and their pets) would have a significant impact (as defined by CEQA) on all, or even most, wildlife species now using the portion of the site to be dedicated as open space. Nonetheless, the final *Habitat Management Plan* will include specific provisions for monitoring sensitive biotic resources of the open space preserve so that adjustments to the plan can be made if any performance standards are not achieved.

- 69.13 Project-proposed provisions for wildlife movement corridors are discussed on pages IV.G--48 through IV.G--49 of the Draft EIR. Proposed measures include preserving the southern and western portions of the project site as open space, providing wildlife movement corridors of at least 300 feet in width, providing road undercrossings, and installing directional fencing along roads. These measures are to be incorporated into the final *Habitat Management Plan* for review by the U.S. Fish and Wildlife Service. It is anticipated that the movement corridors would be managed in the same manner as other open space areas, with an objective of optimizing habitat value for the target species.

70. Gary Binger, Deputy Executive Director, Planning Director, Association of Bay Area Governments; January 30, 1997

- 70.01 Comment noted. The ABAG regional policies referenced by this comment are cited on pages IV.A--29 and IV.C--26 of the Draft EIR. The commenter cites/references information that is contained in the Draft EIR. This statement does not address the adequacy or the completeness of the Draft EIR. Accordingly, no further response is necessary.
- 70.02 The potential precedent-setting effect of the proposed ULL change is addressed on page IV.B--26 of the EIR (see errata herein); also see response to similar comment 84.12.
- 70.03 Please refer to Master Response E, item (4) regarding future roadway construction assumptions.
- 70.04 The proposed project design lists a number of components that are designed to encourage the use of transit to and from the project, including provision of shuttle buses and an adequate number of bus stops. These provisions are designed to encourage the provision of transit service from the local transit agencies, especially Tri-Delta Transit.

More details regarding routing and frequency of service are not available at this stage of the development review process. However, it can be stated that residential densities of 12 units or more per acre are generally considered to support transit service efficiently, while lower densities are less efficiently served.¹ The project proposes development of 229 units (on 19.0 acres) at densities ranging from 12.0 to 20.9 units per net acre (Planning Areas 19 and 28), and development of 1,268 units (on 69.6 acres) at densities ranging from 21.0 to 29.9 units per acre (Planning Areas 23, 27, 33, 35, 39, and 55) (see Draft EIR, pages III--11 and III--38 through III--40). The level of development, which would be clustered around the two "village centers," would be expected to support some form of transit service.

As recommended in *Mitigation T-12*, the project applicant should coordinate the provision of transit service with these transit operators. Additional requirements to guarantee adequate operation of transit services may be considered as part of *Mitigation T-12*. As indicated in the mitigation measure, if transit service cannot be extended to the site, the unmet demand for this service and associated traffic congestion impacts would represent a significant, unavoidable impact. Please refer to the responses to Comments 30.13 and 84.19 for discussion of transit funding.

¹Tri-Valley Planning Committee, Working Paper #1: Location and Intensity of Urban Development, June 26, 1995, page 31.

- 70.05 The comment notes ABAG support for Draft EIR *Mitigation LU-3*. The statement does not address the adequacy of the Draft EIR. Accordingly, no further response is necessary.
- 70.06 The commenter expresses support for *Mitigation LU-11* (Employment Development Program), and states that implementation should be required. This statement does not address the adequacy or the completeness of the Draft EIR. Accordingly, no further response is necessary.
- 70.07 The Draft EIR traffic analysis is based on the assumption that project jobs would represent new employment, rather than relocation of existing jobs. This appears to be a reasonable assumption, based on ABAG's regionwide and local job projections through the year 2020. Analysis of impacts resulting from job relocation would therefore be speculative at this stage. Please refer to further discussion in the response to Comment 9.12. Actual trip patterns are discussed in the response to Comment 2.13.
- 70.08 The comment acknowledges the reasons an infill development alternative was considered but not evaluated in the Draft EIR, but requests that the policy-makers should consider such mitigation anyway. The comment does not suggest that the alternatives analysis is not adequate or complete. The County may consider these statements when making a decision on the proposed project.

The EIR does include an alternatives analysis which meets the standards set forth in CEQA Section 15126(d); i.e., it "describes a range of reasonable alternatives to the project, or to the location of the project, which could feasibly attain most of the objectives of the project but would avoid or substantially lessen any of the identified significant effects of the project, and evaluates the comparative merits of the alternatives."

- 70.09 The commenter suggests that, based on the magnitude of the project and the impacts identified by this EIR, the County postpone decision on this project until a multi-county growth management strategy can be developed. This comment is not related to the adequacy or the completeness of the Draft EIR. The County may consider this comment when making a decision on the project.

71. Craig A. Goldblatt, Environmental Review Officer, Metropolitan Transportation Commission; January 30, 1997

71.01 No travel data were available from Projections 96 at the commencement of the technical analysis for section IV.C, Transportation, of the Draft EIR, and therefore data from Projections 94 were used as a basis for the year 2010 projections. Since the EIR contains projections to the year 2026, the use of Projections 94 and Projections 96 data for interim year projections in sections IV.C (Transportation) and IV.A (Land Use) of the EIR, respectively, would not be expected to result in major discrepancies in the analysis. The Projections 96 data (presented in Table 8 in section IV.A (Land Use)) is used mainly to provide background information regarding the anticipated future regional urbanization pattern. The use of Projections 94 data instead of Projections 96 data would not alter *Impact LU-2 (Substantial Increase Exceeding Regional Projections)*, since neither projections series assumed development on the Cowell Ranch project site. Similarly, the Draft EIR's conclusions regarding the project's impact on the Brentwood cumulative jobs/housing balance (pages IV.A--39 through IV.A--41) also would not change, since the project would contribute to an improved relationship between job and housing opportunities in the year 2010, using either Projections 94 or Projections 96 as background data.

71.02 Please refer to the response to Comment 47.13 for a discussion of how the land use assumptions for the Year 2026 analysis were developed.

For east Contra Costa County jurisdictions, year 2010 forecasts were based on near-buildout conditions according to adopted General Plans. The year 2026 growth projections assumed total buildout of these plans. Thus, little or no increase in household or job levels is projected between 2010 and 2026.

71.03 Please refer to the response to Comment 1.20 for a discussion of the methodology of projecting future year roadway improvements for the future year analysis and the availability of funding for these improvements.

71.04 Please refer to the response to Comment 2.13 for a general discussion of the trip distribution predicted by the travel demand forecasting model.

The trip distribution patterns for the year 2026 had to be estimated from prior model runs because the East County model uses a congested travel time table to assign home-based work trips. The distribution formulas were re-iterated to account for increased congestion in 2026. The model fills the trip distribution table using an even probability of making a trip of an equal travel time, given that an overall propensity to make a trip anywhere is equal. The net result is that persons commuting in a reverse peak direction (such as to Cowell Ranch employment centers) are willing to travel further.

This comment also raises questions regarding inbound and outbound trips associated with the proposed project. Much of the proposed project employment would consist of retail jobs. Some of the increased trips into the project can be explained by the fact that retail employment has a much higher trip rate than other types of employment. Thus, the "excess" number of workers over jobs is dampened by the attractiveness of other trip purposes in the AM and PM peak periods.

- 71.05 Please refer to the response to Comment 1.20.
- 71.06 The traffic impact study assumes that the State Route 4 widening between Railroad Avenue and the State Route 4 Bypass would be completed by the year 2026 and would serve to mitigate project impacts. In accordance with *Mitigation T-1*, the County would condition approval of specific development applications within Phase I of the project according to progress in completing the widening, as recommended by the commenter. This, however, would only be a temporary mitigation, since full buildout of the project by the year 2026 would create a significant unavoidable adverse impact.
- 71.07 Providing a major employment center in the East County area would provide potential employment opportunities for East County residents. Many of these residents would be commuters who currently travel west on State Route 4 to reach their place of employment. With the employment opportunities proposed by the project, it is possible that many of these commuters would no longer need to travel on State Route 4.
- 71.08 Out-of-county network improvements are not directly reflected in the forecasting models in Contra Costa County. The reference to the possible addition of an HOV lane on I-580 in *Mitigation T-1* was illustrative rather than presumptive; the mitigation process envisions in *Mitigation T-1* would determine ultimate mitigation needs for I-580. Endorsement of the HOV lane project by Contra Costa County interests will contribute to improving its priority in revised RTPs.
- 71.09 *Mitigation T-1* is an appropriate approach for this Master EIR-level traffic impact assessment. It is possible that, at the project permit stage, additional roadway improvements would be required. These improvements cannot be accurately identified in a Master EIR-level assessment, which evaluates a preliminary development plan that is expected to have a very long buildout period extending to the year 2026. If conditions change and additional mitigations beyond the measures identified in Draft EIR Tables 32 and 33 are required, future environmental review for individual development approvals would identify those mitigations. The "performance standards" approach recommended in the Draft EIR not only offers "flexibility," as the comment suggests, but also would ensure that roadway standards are maintained, regardless of the specific package of roadway improvements that are proposed.
- 71.10 If it is determined that Camino Diablo needs to be widened as a result of a specific development application, then this project will be required to complete this widening

as a mitigation measure (see *Mitigation T-1*). As further explained in the response to comment 9.14, if a project would move traffic congestion to unacceptable levels, the project alone would be required to fund the improvements necessary to ensure that traffic conditions return to the accepted standard.

The Draft EIR notes that the project effect on Byron Highway could be mitigated either through widening of the highway or construction of a second route (e.g., Route 239). The Draft EIR (page IV.C--56) indicates that widening of Byron Highway to four lanes would reduce the project's impact on this route to a less-than-significant level. In accordance with *Mitigation T-1*, the County would condition project approval upon applicant contribution to this measure.

Please refer to the response to Comment 1.20 for a discussion of the methodology of projecting future year roadway improvements for the future year analysis and the availability of funding for these improvements.

- 71.11 It is the purpose of the Draft EIR to analyze the transportation impacts of the project and determine what improvements would be necessary. In implementation and specific development approvals, actions recommended here can be taken to mitigate the project's contribution to traffic on transportation facilities in eastern Contra Costa County.

**72. Ousama H. Kwar, County Engineer, County of Alameda Public Works Agency;
January 30, 1997**

72.01 Alameda County's policy on the widening of Vasco Road is included in the Draft EIR and is acknowledged in this response document. The report does not imply that Alameda County has a similar policy against safety improvements to Vasco Road.

72.02 Please refer to the response to Comment 2.13 for a discussion of the trip distribution predicted by the travel demand forecasting model.

It should be noted that an increase of 10 vehicles between the No Project and With Project scenarios does not imply that only 10 trips would be added by the proposed project. The proposed project would produce a number of changes in the traffic patterns of the region, making a direct comparison difficult. For scenarios in which Vasco Road is operating above capacity, the traffic model reduces estimated speed on Vasco Road; this condition in turn would discourage additional motorists from using Vasco Road.

72.03 Increased traffic on Vasco Road would not necessarily increase safety risks for drivers or other roadway users. However, the Draft EIR analysis identified a significant unavoidable traffic impact on Vasco Road. (See also response to Comment 72.04 below.)

72.04 The Draft EIR analysis identified a significant unavoidable impact on Vasco Road. However, through the mitigation process envisioned by *Mitigation T-1*, the project could be required to contribute fair share funding towards the roadway improvement project cited by this comment, based on the amount of project traffic that would use this facility.

72.05 The provisions mentioned by this comment may be considered as part of the Travel Demand Management (TDM) program recommended in *Mitigation T-1*.

73. Josephine and Fred Merritt, 355 Fir Street, Brentwood; January 30, 1997

- 73.01 Section IV.C, Transportation, of the Draft EIR addresses project impacts on traffic conditions on surrounding roadways, including State Route 4. The EIR noise assessment assumed that the State Route 4 Bypass would be operating by the time the proposed Cowell Ranch project would begin generating traffic. Traffic noise levels, therefore, are not expected to increase substantially on Brentwood Boulevard.

74. Tom Mooers, East Bay Field Representative, and Jim Sayer, Executive Director, Greenbelt Alliance; January 30, 1997

74.01 This comment recommends that the Draft EIR be revised and recirculated because it fails to meet CEQA requirements for analysis of (1) the project's impact on water and sewer services, (2) existing environmental conditions (i.e., transportation system constraints, threats to fish and wildlife, existing land use patterns), (2) the likely extent and severity of project impacts, (4) a reasonable range of alternatives to the project, and (5) significant, unavoidable growth-inducing impacts of the project. These issues are addressed specifically in the responses that follow (see the responses to Comments 74.05, 74.08, 74.10, 74.12, 74.13, 74.22, 74.23, 74.24, 74.25, 74.27, 74.39, 74.41, 74.47, and 74.60).

CEQA Guidelines section 15088.5 states that a lead agency is required to recirculate an EIR when "*significant new information*" is added to the EIR prior to EIR certification. "Significant new information may include a disclosure showing that:

- (1) *A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.*
- (2) *A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.*
- (3) *A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.*
- (4) *The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.*

Section 15088.5(b) further states that "*recirculation is not required where the new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in an adequate EIR.*"

None of the revisions to the Draft EIR that are included in this Final EIR meet the above criteria for recirculation of the Draft EIR. No new significant impacts were identified. Mitigation measures were revised in response to the comments received. These revised mitigation measures further reduce environmental impacts identified in the EIR or clarify how the identified impacts will be mitigated or addressed.

74.02 For each environmental topic area, the Draft EIR identifies relevant County General Plan provisions, and uses these provisions as significance criteria for determinations regarding the significance of project impacts. Relevant inconsistencies with these General Plan provisions are cited and discussed where applicable (e.g., in the

discussion of *Impact LU-1*, pages IV.A--32 through IV.A--33 of the Draft EIR, which identifies potential inconsistencies with policies regarding open space and infill development). This approach is consistent with CEQA Guidelines section 15125(b), which states that *"the EIR shall discuss any inconsistencies between the proposed project and applicable general plans and regional plans."* In addition, section VI.A (CEQA-Required Assessment Conclusions, "Growth-Inducing Effects") describes the potential precedent-setting effects of the proposed *Urban Limit Line* revision and other aspects of the project, as described by the commenter.

The commenter states that the Draft EIR fails to identify the full range of amendments to the County General Plan that would be required to accommodate the project. The role of the EIR is to describe the project as proposed, and to evaluate its environmental impacts, including potential inconsistencies with relevant General Plan provisions. The Draft EIR fulfills this role. The EIR's function is not to determine the appropriate "balance" among General Plan policies. This will be accomplished through the planning review and analysis of the project conducted by Contra Costa County Community Development Department.

It is important to note that the General Plan addresses the question of achieving "a proper balancing" among policies. The General Plan states that *"while cautioning the reader of this General Plan document against myopically focusing on a particular policy without reference to its harmonized context, it is important that certain of these guiding policies be expressed with stronger levels of commitment than others...there are occasions where a proper balancing of the hundreds of policies contained in this document, when viewed as an integrated whole, would not warrant strict adherence to a particular policy..."*¹ Thus, staff interpretation of the provisions cited by this comment would be necessary before further amendments to the General Plan could be contemplated.

- 74.03 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Land use	IV.A.4	Yes
Open space	IV.A.4	Yes
Agriculture	IV.B.4	Yes
Traffic	IV.C.4	Yes

¹County of Contra Costa, Contra Costa County General Plan, 1995-2010, July 1996, page 1-8.

Biological resources (wildlife habitat)	IV.G.4	Yes
Air quality	IV.K.4	Yes

- 74.04 As discussed in the response to Comment 74.02 above, the Draft EIR identifies relevant General Plan provisions, and uses these provisions as significance criteria for determinations regarding the significance of project impacts. Relevant inconsistencies with these General Plan provisions are cited and discussed where applicable (e.g., in the discussion of *Impact LU-1*, pages IV.A--32 through IV.A--33 of the Draft EIR, which identifies potential inconsistencies with policies regarding open space and infill development as a partial basis for the conclusion that the loss of open space resulting from the project would represent a significant, unavoidable impact). This approach is consistent with CEQA Guidelines section 15125(b), which states that *"the EIR shall discuss any inconsistencies between the proposed project and applicable general plans and regional plans."*

Please refer to the responses to Comments 74.12, 74.39, 74.41, 74.43, 74.46, 74.52, 74.57, 74.60, and 74.61 for discussion of the Draft EIR's findings regarding project impacts on water supply, wastewater treatment service, biological resources, geologic conditions, water quality, and groundwater resources.

- 74.05 CEQA Guidelines Section 15126 (d) (3) states that "The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project." Pages V-3 through V-46 of the Draft EIR provide sufficient comparative information regarding the alternative to comply with this section of the CEQA Guidelines. There is no requirement under CEQA to compare each of the alternatives to one another as suggested in this comment. CEQA Guidelines section 15126(d)(3) describes the level of information that an EIR shall include "to allow meaningful evaluation, analysis, and comparison with the proposed project." The alternatives section of the EIR was specifically designed and prepared to comply with this CEQA section. Although the CEQA Guidelines do not require a comparison of the alternatives against each other, the alternatives section of this EIR is designed to provide for such a comparison in the organization of the text (comparative heading format). Regarding the statement that the Mitigated Alternative fails to mitigate or address many of the most severe environmental effects of the project, see response to Comment 74.06.

- 74.06 This comment is non-specific. The mitigated alternative, as explained on Draft EIR page V--9, incorporates all of the mitigations recommended through the EIR which involve a modification to the project preliminary plan design and associated design standards. As a result, identified impacts directly associated with the physical design of the project are mitigated, fulfilling the purpose of the alternatives identification process "to avoid or substantially lessen any of the significant effects of the project" (CEQA Section 15126(d)). There is no CEQA requirement that an alternative shall be identified and evaluated that mitigates all of the impacts of the project. Based on the analysis of the mitigated alternative presented on pages V-14 through 16 of the Draft

EIR, the EIR authors respectfully disagree with the comment that the "...mitigated alternative fails to mitigate or address the most severe environmental impacts of the project."

- 74.07 The substance of the proposed General Plan Amendment is discussed on pages III-11 through III-15 of the Draft EIR. The Draft EIR adequately analyzed the substance of the general plan amendment request throughout the document. In addition, the Draft EIR discusses the project's consistency with the County and City's General Plans under each environmental topic. The actual text of the amendment will be finalized during the hearings on the project.
- 74.08 It is not clear from the comment what information is believed to be missing. The commenter is referred to the technical appendices of the Draft EIR, *Biological Resources, Cowell Ranch, Contra Costa County* (LSA Associates 1993), *Supplemental Rare Plant Survey, Cowell Ranch, Contra Costa County* (LSA Associates 1994), *Supplemental Rare Plant Survey, No. 2, Cowell Ranch, Contra Costa County* (LSA Associates 1994), *Results of Preliminary Kit Fox Survey, Cowell Ranch* (LSA Associates 1994), and *Cowell Ranch Jurisdictional Determination* (Vols. 1, 2, 3) (Zentner and Zentner 1993). These documents are available through the Contra Costa County Community Development Department.
- 74.09 Regarding the adequacy of the Draft EIR with respect to mitigation of water supply impacts, wastewater treatment impacts, flood control needs, and biological resources "among other impacts," the program EIR includes all reasonable information available regarding the various water supply, wastewater treatment, flood control, and biological resource impact mitigation options. The EIR does not inadequately defer or ignore any of these mitigation needs. In appropriate cases, the specific mitigation will be determined at a future time when site-specific development proposals are available. Please refer to Master Response B and A regarding use of future study in this EIR, and the overall Master EIR approach, respectively.
- 74.10 This appears to be a statement without substantial evidence. As such, it is considered a statement of opinion. The comment does not address the adequacy or completeness of the Draft EIR. The County may consider this statement when making a decision on the proposed project.
- 74.11 The CEQA Guidelines (section 15364) define "feasible" as "*capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.*" This standard has been used to judge the feasibility of mitigation measures recommended in the Draft EIR. Please refer to the responses below for more detailed discussion of mitigation feasibility.

- 74.12 Comment acknowledged. The comment asks for additional analysis of the impacts and feasibility of providing water and sewer service for the project. In response to this comment and other comments, changes have been made to acknowledge that the mitigation of some of the potentially significant environmental water and sewer impacts cannot be determined until a future date. As a result, with respect to some of the impacts for which mitigation is not known to be feasible at this time, the mitigation conclusion has been changed to state that consistent with the Master EIR approach, additional information will be required to adequately determine if the impact has been mitigated to an insignificant level. Thus, the impact will be identified as potentially significant and unavoidable. Please see Master Response B regarding use of future study as mitigation in a Master EIR. Please also refer to the responses to Comments 2.23 and 2.24.
- 74.13 Pages V-1 through -46 meet the requirements of CEQA Guidelines Section 15126 (d) by presenting a reasonable range of alternatives. There are a number of alternatives described and analyzed that would reduce or eliminate the significant impacts associated with the proposed project, including the no project alternative, the no general plan amendment alternative, the mitigated project alternative, alternative site FUA #1, and for the most part, the North Livermore alternative site.
- 74.14 As explained in Response 74.07, the Draft EIR analyzed the substance of the general plan amendment application. The actual text of the amendment will be prepared during the project hearings. The EIR provides information regarding the project's relation to the General Plan and it is up to the legislative body (in this instance, the Board of Supervisors), to determine if the project is consistent with the General Plan and what specific amendments they are willing to make to the General Plan.

The Draft EIR analyzed the project in relation to the information identified in the specific bullet points as follows: (1) the Draft EIR discussed the project's impact on agricultural resources on pages IV.B--18 through IV.B--26, (2) the Draft EIR discussed the effect of the change to the Urban Limit Line on land uses on pages IV.A--32 through IV.A--33, (3) the Draft EIR discussed the project's impact on a jobs/housing balance on pages IV.A--57 through IV.A--63, (4) the project's relation to General Plan Policy 3.8 regarding encouragement of infill development is discussed on page IV.A--33, (5) the project's relation to General Plan Policy 9-5 regarding open space areas between cities and/or communities is discussed on page IV.A--33, (6) the project's impact on public facilities is discussed on pages IV.F--1 through IV.F--104 (specifically, the project's relation to General Plan Policy 7-21 regarding adequate water supply was discussed on page IV.F--26, and the project's relation to General Plan Policies 3-6 through 3-9 regarding adequate wastewater facilities was discussed on pages IV.F--35 through 42); and (7) the Draft EIR analyzed the General Plan Policy regarding protection of hillsides with grades of 26 percent on page IV.D--45.

Regarding the "Principles for Cowell Ranch," the Draft EIR has been revised throughout the document to clarify that the "Principles" do not represent adopted

County General Plan policy, and thus do not constitute significance criteria. See response to Comment 85.15.

- 74.15 The project description-related concerns raised by the commenter are addressed in this responses and in responses 74.16 through 74.20 that follow. See response to Comment 74.07 for discussion of general plan amendments required for the project.

As explained in Response 74.07 and 74.14, the Draft EIR analyzed the substance of the general plan amendment application. The actual text of the amendment will be prepared during the project hearings. The EIR provides information regarding the project's relation to the General Plan and it is up to the legislative body (in this instance, the Board of Supervisors), to determine if the project is consistent with the General Plan and what specific amendments they are willing to make to the General Plan.

- 74.16 See response to Comment 74.09.

- 74.17 See response to Comment 39.27. Separate Draft Fiscal Analyses have been prepared and is available by contacting the County Community Development Department.

- 74.18 The Draft EIR states the applicant (and EIR) assumptions with respect to project buildout phasing and timing in section III (Project Description). These assumptions represent a conservatively high rate of buildout in order to ascertain "worst case" environment impact potentials and mitigation needs. If these assumptions prove overly conservative, and in fact the project builds out at a slower rate (over a longer time period), the relative project impacts would be reduced, and no new significant impact or mitigation need not considered in the Draft EIR would be anticipated. If the EIR assumptions are not conservative enough, and the project builds out at a substantially faster rather than the applicant had projected, then substantial additional impact potentials and mitigation needs may become evident, and the environmental documentation which will be routinely conducted for associated individual project approvals (subdivision applications, etc.) will require corresponding subsequent environmental analysis. Please also see response to comment 39.27.

- 74.19 See response to comment 39.27. Separate Draft Fiscal Analyses have been prepared and are available by contacting the County Community Development Department.

- 74.20 The comment is unclear (ambiguous). The EIR does not improperly segment the project or the analysis. The Master EIR does not divide the project (the GPA, rezoning, and development agreement application) into a number of separate individual subdivisions and commercial developments) but rather, following the CEQA definition of what constitutes the "project" (see Draft EIR page I--1) and following the intent of CEQA's Master EIR provisions, correctly treats the application as one

consolidated action. The purpose of an EIR is to analyze the project as proposed. As the comment notes, the project does not include all property owned by the Cowell Foundation. It would not be appropriate for the EIR to analyze Cowell lands that are not part of the proposed project, as part of the project. The land Cowell owns to the south of the proposed project is discussed under *Impact LU-9* on page IV.A--52.

- 74.21 The comment asks for additional background/setting information on water supply options available to the project and their respective demands.

The Draft EIR discussed a long-term water source for treated and raw water for the Cowell Ranch project by discussing and analyzing various water options. The EIR included all reasonable information available on the various water supply options and analyzed the potential impacts of the various options. The Master EIR did not defer or ignore the analysis of supplying water. The Cowell Ranch EIR recognizes that water must be supplied to the project, that it can come from one of the possible options analyzed in the EIR and analyzed the impacts that could result from those options and suggested ways to address those impacts.

At this preliminary stage of the project, it is not feasible to determine or select the water supply option that will be utilized for subsequent projects and CEQA does not require that a specific source of water be identified. The Draft EIR concluded that if one of the options is selected, the water supply impacts would be mitigated to a less-than-significant level. At this particular time, a determination cannot be made whether the project will have a significant or less-than-significant impact on water supply since the source of the supply has not been confirmed. That determination cannot be made until more information is available at a subsequent and more detailed project application. As a result, the mitigation conclusion has been changed to state that consistent with the Master EIR approach, future environmental review will be required to adequately analyze the environmental consequence of the option chosen to meet the subsequent project's future specific water needs. At this time, these impacts will remain potentially significant and unavoidable.

- 74.22 Please refer to the response to Comment 1.18 for a discussion of the analysis of Kirker Pass Road and Ygnacio Valley Road, and to the response to Comment 52.05 for a discussion of the intersection selection process.
- 74.23 Various surveys for special status animals (e.g., California tiger salamanders, California red-legged frogs, vernal pool fairy shrimp) were conducted by LSA Associates. Surveys for California tiger salamander breeding habitat were comprehensive. A detailed wetland survey was conducted by Zentner and Zentner. Additional reconnaissance surveys were conducted by H.T. Harvey and Associates, and by Hartesveldt Ecological Consulting Services. During the winter of 1996-97, additional surveys were conducted for vernal pool fairy shrimp by Entomological Consulting Services. The surveys conducted on the project site were adequate to describe and delineate biotic habitats. Significant impacts could be identified and

conceptual mitigation prescribed. Although no detailed surveys were conducted for San Joaquin kit fox, the entire site is presumed by the Draft EIR to be suitable habitat, a presumption that has also been made by the U.S. Fish and Wildlife Service. Therefore, project impacts on the San Joaquin kit fox are considered significant and mitigation is required. As noted in the Draft EIR (page IV.G--59), most of the cumulative development would occur on existing agricultural land with limited biotic value. A discussion of cumulative impacts in an EIR does not generally entail a detailed discussion of regional resources. In the opinion of the EIR preparers, the level of detail in biological resource setting information provided in the Draft EIR is adequate for purposes of this Master EIR.

- 74.24 Regarding project economic effects, including traffic analysis trip distribution purposes, the issue of housing/jobs relationships within a project and a project vicinity has been considered because of its effect on commute period traffic levels, and associated traffic congestion and air quality impacts. The Draft EIR analysis of project-related trip distribution and associated housing/jobs relationships includes adequate consideration of project interregional relationships to employment and housing centers in east, central and western Contra Costa County, the Tri-Valley area, Alameda County, San Joaquin County, and other (outside Contra Costa) locations. Regarding the suggested need for a regional market study, Appendix C of the EIR traffic analysis explains that the housing and job growth projections included in the traffic model for the year 2010 are consistent with projections included in other regional models developed by MTC (i.e., its regional transportation model), the County's countywide model, and other subarea models being developed by the Contra Costa Transportation Authority. As explained in the Draft EIR Appendix C, the year 2015 and 2020 demographic and land use data used in the traffic modelling for the EIR were developed with the assistance of Recht Hausrath & Associates, urban economists, working in consultation with County staff. The projections included consideration of the trends reflected in the existing regional models cited above, as well as the professional judgment of Recht Hausrath & Associates regarding projected housing and employment growth issues and trends throughout the nine-county Bay Area and San Joaquin County (see footnote at bottom of DEIR page IV.A--40). Regarding project economic market impacts, including possible effects on residential and non-residential demands and absorption rates in competing areas, including Brentwood, CEQA Guidelines Section 15131 states that such economic impacts shall not be treated as significant effects on the environment. As a result, these market issues were not evaluated. A market study addressing the projected demand for residential and non-residential development in the region and subregion has been separately prepared for the project, and is available for review at the Contra Costa County Department of Community Development. This market information may be considered by the County, separate from the EIR, when making decisions on the proposed project.

- 74.25 See response to comment 74.24, above.

- 74.26 The comment asks for a discussion of the existing funding shortfalls in the East County area relative to water and sewer services, and suggests that existing development is unable to pay its own way for the services. Section IV.F of the Draft EIR evaluated water and sewer service options available to the project, including annexation to the City of Brentwood. In light of this, the commenter fails to provide the specific information regarding the East County service situation that is needed to support the premise of the comment; there are other possible explanations--e.g., the pace of development planning is simply ahead of infrastructure decisions, permitting or construction. With regard to the proposed Cowell Ranch project, provision of funding for necessary water and sewer infrastructure is obviously an essential element of the plan, without which the project cannot proceed.
- 74.27 The description of regional agricultural production characteristics and trends on Draft EIR pages IV.B--1, 3, 4 and 21 is sufficient for assessment of the relative impact of the project. The additional data suggested in this comment would not substantially affect the EIR conclusions, i.e., would not change or add substantially to the agricultural impact and mitigation needs described under AG-1, AG-2, AG-3, AG-4, and AG-5.
- 74.28 The EIR authors respectfully disagree with this comment. This comment offers no specific reasons why the setting information provided in the Draft EIR is inadequate. Pages IV.F-71 through 74 provide an adequate setting description of the school districts and schools that would be affected by the project.
- 74.29 The Draft EIR provides extensive "facts and analysis" to support its conclusions that certain potentially significant impacts would be reduced to a less-than-significant level with mitigation; please refer to the responses to Comments 74.30 through 74.52 below. Page VI--5 of the Draft EIR lists environmental effects that would be insignificant or could be adequately addressed by County staff, based on the determinations of the County-prepared Initial Study for the project. As indicated on page VI--5, these Initial Study determinations (Environmental Checklist Form) and associated explanations by County staff are included in Appendix A of the Draft EIR.
- 74.30 See Master Response C, especially items (1), (2), and (4).
- 74.31 See Master Response C, especially item (1).
- 74.32 The estimated number of trips generated by the project was based on standard trip generation assumptions that are used in traffic impact studies conducted in Contra Costa County.

The methodology for selecting the intersections evaluated in the Draft EIR traffic analysis involved a "screening analysis" based on performance standards. The study intersections that would exceed performance standards are listed in Tables 28 and 29 of the Draft EIR for the Years 2010 and 2026 scenarios, respectively. Other

intersections were assumed to be located such that the project would not contribute a significant number of trips to the intersection. A screening analysis performed with the travel demand forecasting model determined which intersections would receive 50 or more peak hour vehicle trips. "Study" intersections were then selected in coordination with Contra Costa County staff. Please refer to the footnote at the bottom of page IV.C-8 of the Draft EIR for more detail on the intersection selection process.

See Master Response C, item 1. See also the response to Comment 54.05.

The standard approach to performing an analysis of future-year scenarios is to make assumptions both about expected land use in the future year and about expected roadway improvements. The list of expected roadway improvement assumptions was developed in collaboration with the Contra Costa County Community Development Department and is, in general, consistent with the Metropolitan Transportation Commission's Regional Transportation Plan (RTP) and the East Contra Costa Transportation Strategic Plan. These documents constitute the best estimate of what transportation improvements can be reasonably expected by the years 2010 and 2026.

It is typical for future year analyses such as these to assume transportation improvements contain projects for which no specific source of funding exists, since it is rare that a transportation project will have a source of specific funding 30 years before it is scheduled to be completed. In particular, many planned roadway improvements in developing areas are constructed and/or funded by developers. Completion of these improvements are typically required as a condition of development.

The lengthy development period for the proposed Cowell Ranch project extends well beyond the capital improvement programming (CIP) process undertaken by public agencies. The CIP process takes into account funds that are accrued through developer contributions and collection of impact fees. Thus, it is highly unlikely that any publicly-funded portion of the longer-term improvements associated with the project could be fully committed at the present time.

Mitigation T-1 requires that, as a condition of approval for each individual future development application on the project site that may have a significant traffic impact, the applicant shall demonstrate compliance with applicable roadway system performance standards. This may be achieved through fair-share funding of offsite roadway intersection and roadway link improvements, use of travel demand management measures, and management of project buildout to achieve a jobs/housing balance. This measure would ensure that adequate roadway improvements are in place before specific development proposal on the project site are approved.

- 74.33 Please refer to the response to Comment 1.20 for a discussion of the methodology of projecting future year roadway improvements for the future year analysis and the availability of funding for these improvements.
- 74.34 Please refer to the response to Comment 2.13 for a discussion of the trip distribution predicted by the travel demand forecasting model. To be consistent, the air quality calculations must be based on the same traffic analysis that appears in the traffic impacts section of the EIR. Based on the trip generation and average trip rates developed in the traffic analysis, the project was found to have a significant and unavoidable regional air quality impact.
- 74.35 The Draft EIR (pages IV.K--9 through IV.K--11) found that the project would have potentially significant impacts on sensitive receptors during construction. The local air quality analysis predicted traffic-related air contaminant concentrations near carbon monoxide "hotspots" but found no violations of the state/federal ambient air quality standards. The Draft EIR (pages IV.K--11 through IV.K--14) found that the proposed project would have a significant and unavoidable impact on regional air quality related to automobile traffic.
- 74.36 The criteria for determining significance of impacts, which are described on pages IV.K--8 through IV.K--9 of the Draft EIR, consistent with Bay Area Air Quality Management District guidance for environmental documents. According the BAAQMD guidance, inconsistency with the General Plan (and ultimately the regional air quality plan) would, under certain circumstances, result in the determination that a project would have a significant cumulative impact. In this case, however, the proposed project was individually found to have a significant regional impact; according the BAAQMD guidance, a project that is individually found to have a significant impact also has a significant cumulative impact, regardless of its consistency with the local General Plan. The Contra Costa County Board of Supervisors will evaluate the project's consistency with the County General Plan as part of its decision on the project, and will consider the appropriate balance between General Plan goals and policies for air quality and other General Plan provisions.
- Please note that *Mitigation T-1* (see Draft EIR, pages IV.C--53 through IV.C--59) recommends implementation of travel demand management measures, including carpool and vanpool incentives, flexible or staggered working hours, telecommute facilities, park-and-ride facilities, and transit facilities. In addition, *Mitigation LU-12* (Draft EIR, page IV.A--63) recommends provision of an internal project transit system and a transit/small-scale convenience commercial center in the Golf Course Residential subarea. These mitigations encompass the types of measures suggested by the commenter.
- 74.37 Bay Area Air Quality Management District CEQA guidance would require a health risk assessment for any new sources of Toxic Air Contaminants (TACs) if emissions

exceeded certain thresholds. The proposed project is not a source of TACs, and therefore the health risk analysis requested by the comment would not be required.

- 74.38 Under CEQA, the EIR is required to identify the physical impacts of the project on the existing environment, not vice versa. In the Baird v. Contra Costa County decision (1995) (32 Cal.App.4th 1464), the court concluded that to impose upon the project a requirement that it address or mitigate pre-existing conditions would impose a requirement beyond those stated in CEQA or its guidelines, and is thus prohibited. Please refer to the response to Comment 55.04 regarding Unimin Kellogg Creek Sand Quarry impacts on the project.

The Unimin Kellogg Creek Sand Quarry is not included in the BAAQMD's inventory of sources of Toxic Air Contaminants (BAAQMD, 1995 Toxic Air Contaminant Report, Volume II, March 1997). This means either that the facility is not a source of TAC emissions, or that quantified emissions are below the thresholds that require inclusion in the inventory. Since the BAAQMD thresholds for inclusion in the inventory are based on health risk, emissions from the Unimin Kellogg Creek Sand Quarry would result in a de minimis level of health risk.

- 74.39 The comment questions the adequacy of the water supply analysis in the Draft EIR and asks for further discussion of the Los Vaqueros Reservoir project. Identification of a reliable long-term source of water for the project is requested, along with a review of the secondary impacts associated with the water supply.

The EIR appropriately identified the City of Brentwood as a purveyor of water; the City is in fact a water purveyor. The 7,000 acre-feet of water obtained by Brentwood from ECCID is not for temporary use only, as suggested by the comment; it is the first block of water the City is in the process of obtaining from ECCID, the transfer of which will be complete in the year 2009.

With respect to references to the Contra Costa Water District (CCWD), please refer to the responses to Comments 19.01 through 19.18 (from the CCWD).

The project does not propose to acquire water from the Los Vaqueros Reservoir.

As explained in Response 74.21, the Draft Master EIR does not defer the analysis of environmental impacts or the formulation of mitigation measures. The Draft EIR evaluated impacts and proposed measures at level of study and specificity consistent with the current project applications which include a general plan amendment, preliminary development plan and development agreement. The project's impacts and mitigation measures regarding water supply as discussed in the Draft Master EIR will be addressed in more detail, as appropriate, when specific applications for final development plan and/or subdivision maps are considered. At that time, the specific water supply option will be chosen to carry out the obligations and mitigation measures that are identified in this Draft Master EIR. If the option selected causes an

adverse significant environmental impact that has not been analyzed or mitigated by the Master EIR, subsequent environmental review will be required consistent with the Master EIR process. (Please see Master Response B regarding use of future study as mitigation in Master EIRs.)

In response to the comments made, *Mitigations PF-1, PF-2 and PF-3*, which address water supply, have been revised to acknowledge that the exact mitigation option cannot be determined until a future date. Since a specific mitigation option is not known to be feasible at this time, the mitigation conclusion has been changed to state that, consistent with the Master EIR approach, additional information will be required with a subsequent project to adequately determine if the impact has been mitigated to an insignificant level. At this time, the impact will be potentially significant and unavoidable.

Consistent with the growth management standards contained in the County General Plan (page 4-11), the project applicant will be required to demonstrate that adequate water quantity and water quality can be provided before approval of a subdivision map.

The commenter believes the water analysis is inadequate and cites the case of Natural Heritage Project v. County of Stanislaus (1996) 48 Cal.App.4th 182. That case standard for the proposition that an environmental impact report cannot defer all analysis of the significant environmental effects of supplying water. The Cowell Ranch Master EIR did not defer the analysis of supplying water. Rather, the Master EIR included all reasonable information available on the various water supply options and analyzed the potential impacts of the various options. Unlike the EIR in the Stanislaus Natural Heritage Project case, the Cowell Ranch Master EIR did not inadequately defer or ignore the analysis of supplying water.

With regard to secondary impacts associated with the supply of water to the project, any facilities construction will be required to undergo detailed, project-level environmental review before permitting and approval; this analysis is beyond the scope of the Cowell Ranch EIR. Since the source of the supply is proposed to come from existing surplus water diversions from the Delta that are covered by existing water rights, there will be no net increase in Delta water withdrawals; thus, there is no basis for challenging and re-examining the water supply capacity of the providers of this water (ECCID and BBID); see response to Comment 19.14. Please also refer to the response to Comment 80.01 (regarding use of the Master EIR approach), and to the responses to Comments 2.24 and 63.05.

- 74.40 The comment questions the adequacy of the sewer service analysis in the Draft EIR and requests a detailed, project-level analysis of each potential wastewater treatment option available to the project.

The Master EIR includes as much information as feasibly possible with respect to sewer supply. With respect to onsite improvements, the Draft EIR (pages IV.F--35 through F--38) sets forth and analyzes a possible project sewer system. At this preliminary planning stage, CEQA does not require that a specific sewer source and treatment be identified. The Draft EIR described the various sewer treatment and disposable alternatives currently under consideration by the City of Brentwood. The Draft EIR (page IV.F--40) recognizes that the secondary impacts resulting from sewer improvements will be evaluated as part of future project specific applications.

The Draft EIR concluded that if various options are selected with respect to sewer supply, sewer impacts would be mitigated to a less-than-significant level. At this particular time, a determination cannot be made whether the project will have a significant or less than significant impact on sewer since the actual wastewater facilities to be used are not known at this time. That determination will be made when more information is available at a subsequent and more detailed project application stage. As a result, the conclusions in *Mitigation PF-5* and *PF-6* have been changed to state that, consistent with the Master EIR approach, additional information will need to be considered at the time site-specific proposals are brought forward to make a determination on the mitigation of this impact. At this time, the impact will remain potentially significant and unavoidable.

Consistent with the growth management standards contained in the County General Plan (page 4-11), the project applicant will be required to demonstrate that adequate sanitary sewer quantity and quality can be provided before approval of a subdivision.

A preliminary feasibility study of an onsite wastewater treatment-reclamation facility to serve the project was completed by Swanson Oswald Associates, and provides sufficient information to conclude that an onsite treatment system is feasible. While such an onsite system is feasible, it is not the preferred option of the applicant. Should an onsite treatment system ultimately be pursued for the project, then a detailed environmental analysis would necessarily be required for approval and permitting, at which time the specific impacts of the wastewater facilities would be addressed and reviewed publicly. The same would apply to the expansion of the Brentwood treatment plant or the Ironhouse Sanitary District facilities, should either of these options be selected.

With respect to consideration of reclaimed water opportunities, please see response to Comment 49.01. Please also refer to the response to Comment 80.01 (regarding use of the Master EIR approach), and to the responses to Comments 2.23, 2.24, and 63.05.

- 74.41 The comment asks for a detailed analysis of construction-related impacts of installing water and sewer lines to serve the project.

The specific construction layout of water and sewer lines is not known at this time. Figure 51 identifies sewer service in the area and Figure 52 identifies a possible project sewer system. Once specific improvements and methods of supply are determined as part of a subsequent/future project, these improvements and methods will be the subject of further environmental review as discussed in the responses to Comments 74.21, 74.39, and 74.40.

- 74.42 There is adequate information at this stage in the project review process to:
- (1) identify the general type and probable range of potential geologic/geotechnical impacts, (2) assess geotechnical feasibility of the proposed land use plan and conceptual grading plan, and (3) form an opinion regarding general conformance with the goals and policies of the *Safety Element* of the Contra Costa County General Plan. The following discussion reviews the approach to the geotechnical analysis undertaken for this Master EIR.

A preliminary engineering geologic and geotechnical evaluation was prepared for the project applicant by Harding Lawson Associates (HLA), as discussed in the Draft EIR on pages IV.D--1 and IV.D--2. The HLA report evaluated geologic conditions, geologic hazards and geotechnical conditions for use in preliminary planning of the project. The Draft EIR also considered and reviewed numerous other geotechnical investigations and additional information such as mapping in preparing the geotechnical analysis. As recognized in the Draft EIR and the HLA report, supplemental geologic and geotechnical investigations will be performed at the time that final development plans or subdivisions are processed. These subsequent development plans (consistent with the mitigation measures recommended in this EIR) will undergo supplemental investigations to confirm the findings of the Master EIR and HLA report. The supplemental investigations will include design level recommendations for the site-specific project plans. Supplemental investigations may include subsurface investigation by test borings and test pits, as well as laboratory testing of soil and rock samples. It is not feasible to conduct the supplemental investigations until it is known whether, and to what extent, development will be allowed on the site.

The HLA report and Draft EIR provided adequate geotechnical information for the current project applications. The Draft EIR analysis has indicated that the principal geologic hazards that could affect the development of the project area are landsliding, debris flows, cut-slope stability, earthquake ground shaking, seismically-induced liquefaction, and expansive soils. The analysis indicates that these impacts can be mitigated using measures found to be satisfactory for similar projects and site conditions. In addition, the analysis sets forth criteria and suggested criteria and standards to address the potential geologic impacts.

CEQA allows agencies to conclude that impacts are mitigated to less-than-significant levels despite the need to develop precise mitigation measures after project approval. (e.g., Rio Vista Farm Bureau Center v. County of Solano (1992) 5 Cal.App. 4th 351.)

As long as meaningful information exists to reasonably justify an expectation of compliance, the precise development of mitigation measures can occur at a later time. Consistent with this rule, the analysis and mitigation measures for potential impacts relating to soils and geology provides adequate information and criteria to allow a determination that the impacts can be mitigated to an insignificant level. Requiring supplemental geotechnical investigations consistent with the criteria contained in the mitigation measures, (and after already concluding through a preliminary geotechnical analysis that all impacts can be adequately mitigated), demonstrates a commitment to mitigate the impacts to an insignificant level.

Mitigation SG-8 sets forth specific criteria to be followed to assure that the impacts relating to soils are mitigated to a less-than-significant level. Future site-specific proposals would be required to comply with *Mitigation SG-8* and all other approved mitigation measures. At that time, the lead agency will review the site-specific proposals and confirm that the impacts have been mitigated to a level of insignificance. Please refer to pages IV.D--29 through IV.D--36 of the Draft EIR, which discuss *Mitigation SG-1* and its application to future applications. As acknowledged in the Draft EIR on page IV.D--34, there is substantial, reasonable historic information to support the conclusion that the specific subsequent geotechnical/geologic investigations, monitoring, and specific formulations identified in the master EIR would adequately mitigate the impacts to less-than-significant level. In the review of the site-specific proposals, if it is determined that there are unexpected or greater impacts that were not analyzed in the master EIR, then subsequent environmental review would be prepared as mandated by PRC §21157.1.

- 74.43 Please compare Figure 38 (Slope Inclinations) of the Draft EIR with Figures 42 and 43, which illustrate representative cut and fill inclinations and thicknesses proposed by the project. As can be seen in the comparison of the slope inclination (i.e., existing condition) map with the proposed cut-and-fill maps, grading (where it would occur) typically would preserve ridgelines and hilltops and, in the opinion of the EIR geotechnical consultant, would generally conform to the site's topography.

The County General Plan contains a policy stating that extensive grading is unsuitable where slopes are steeper than 26 percent. Please note, however, that, based on a Board of Supervisors interpretation, County General Plan policies do not prohibit development on hillsides or slopes over 26 percent (see footnote on Draft EIR page IV.D--45). From a geotechnical engineering standpoint, a 26-percent slope is a comparatively gentle inclination, readily and safely graded with minimal impact when limited to small areas. The applicant's plan includes 23 acres (less than one percent of the 4,900-acre site) of grading proposed where slopes are inclined at 26 percent or steeper. Most of the site (about 3,000 acres) would be dedicated as open space, with grading limited to approximately 1,900 acres of the 4,900-acre site.

- 74.44 See response to Comment 74.07.

- 74.45 The comment asks for evidence that the proposed mitigation measures for flood-related impacts would reduce the impacts to a less-than-significant level.

As discussed in the Draft EIR, the County Flood Control District is responsible for flood control planning in the project area. The policies and standards of the District are established to eliminate significant flooding hazards; compliance with the District standards, the Drainage Ordinance and the Floodplain Ordinance, is generally acknowledged to reduce flooding impacts to a less-than-significant level.

The conclusion is consistent with similar findings in the city-certified City of Brentwood General Plan. Also, the Master EIR and "subsequent projects" aspects of this CEQA program provide sufficient mitigation assurance. Please refer also to revisions to drainage-related mitigation measures in section IV.E (Drainage and Water Quality) of the Draft EIR (see section IV, Revisions to the Draft EIR (Errata)).

- 74.46 The comment calls for analysis of the potential impacts associated with the development of flood control improvements noted in the Draft EIR. Please refer to the response to Comment 59.01.

The need for flood control improvements on Kellogg Creek would not be a result of the project; these improvements are being planned by the County Flood Control District independently of the project. The commenter is referred to the Flood Control District for more information on the Kellogg Creek flood control planning efforts and the associated environmental analysis.

- 74.47 The growth-inducing and precedent-setting impacts of the project are also discussed where appropriate in chapter IV of the Draft EIR. See for example, the discussion on page IV.A-32 and -33, which discusses the potential for the project "...to induce growth on open space lands to the south by establishing a precedent for urban development and revision of the County-designated Urban Limit Line in the project vicinity, and by extending infrastructure to the project site."

- 74.48 Potential project impacts on designated Agricultural Core lands and prime farmlands, and the potential nuisance aspects and other incompatibilities associated with the location of urban uses next to agricultural uses, are fully and adequately discussed on Draft EIR pages IV.B--18 through 26.

- 74.49 The conclusion is consistent with similar findings in the city-certified City of Brentwood General Plan. Also, the Master EIR and "subsequent projects" aspects of this CEQA program provide sufficient assurance of mitigation effectiveness.

- 74.50 The comment raises an economic impact or economic justification issue rather than an environmental issue. Such economic questions and issues may warrant consideration in the County's deliberations on the project, but under CEQA cannot be treated as a significant environmental impact unless there is a chain of cause and

effect from the anticipated economic effects to an adverse physical (environmental) change (CEQA Guidelines Section 15131). No evidence has been identified that such a cause and effect would occur due to project relationships to the future housing market.

- 74.51 Please refer to Draft EIR section VI.E (CEQA-Required Assessment Conclusions, "Cumulative Impacts") for an explanation of the approach to cumulative impact assessment in the EIR. As explained in that section, reasonably foreseeable projects are identified in Table 9 (Anticipated New Development in East County Subregion and Surrounding Areas) and Table 10 (Newly Completed, Recently Approved, or Currently Pending Development in Brentwood Planning Area) of the Draft EIR. In addition, cumulative development was incorporated into the Travel Model of Eastern Contra Costa County (East County Model), which was used to evaluate the transportation impacts of the project and project-plus-cumulative development (as described in section IV.C, Transportation, of the Draft EIR), as well as associated air quality and noise impacts (sections IV.K, Air Quality, and IV.L, Noise, of the Draft EIR). Section IV.K, Air Quality, specifically identifies a significant, unavoidable project and cumulative impact on regional air quality (*Impact AQ-2*). In addition, section IV.A, Land Use, identifies significant, unavoidable project and cumulative impacts resulting from loss of open space (*Impact LU-1*), the substantial change in the physical arrangement of the Brentwood community (*Impact LU-4*), and impacts on nearby rural residential uses (*Impact LU-6*), as well as a potentially significant project and cumulative impact on the contiguous northeast portion of Special Planning Area (SPA) "J" (*Impact LU-8*). Section IV.B, Agriculture, identifies cumulative prime agricultural land losses in Contra Costa County as a possible significant, unavoidable cumulative impact (*Impact AG-2*), and also identifies the project's precedent-setting effects on nearby agricultural uses as a significant, unavoidable impact. Finally, section VI.A (CEQA-Required Assessment Conclusions, "Growth-Inducing Effects") addresses the potential precedent-setting effects of the project, including the possibility that project approval could encourage owners of nearby property currently designated for agricultural or rural use to seek similar General Plan Amendments to permit urban development.

These impact findings address the issues raised by the commenter. Further assumptions regarding areas likely to develop based on the precedent set by the project would be speculative and would not represent "reasonably foreseeable projects" required for cumulative analysis under CEQA.

- 74.52 Please refer to the response to Comment 51.12. As noted in that response, most of the cumulative projects involve agricultural lands that are either unsuitable for special status species, or of marginal value for these species. A detailed breakdown of habitat losses for each project was not available, although the losses of some are known, as described in the response to Comment 51.12. A discussion of cumulative impacts in an EIR does not generally entail a detailed breakdown of habitat acreage.

The proposed project would include an adjustment of the Contra Costa County General Plan-designated *Urban Limit Line* (ULL), but this adjustment would result in no net loss of lands inside and outside of the ULL.

- 74.53 The commenter's concerns regarding the adequacy and feasibility of Draft EIR-recommended mitigation measures are addressed in this response and in Responses 74.54 through 74.68 that following. Regarding mitigation for soils and geology impact, please refer to the response to Comment 74.42 above.
- 74.54 Please refer to the response to Comment 1.20. The Draft EIR identifies the legislative, political, and technical difficulties associated with certain mitigation measures, where possible. It is also important to note that many of the mitigation strategies listed require approval by the County itself.

The commenter does not specify which project-related traffic improvements they consider "politically unacceptable," other than noting (in Comment 74.33) that Alameda County has opposed widening of Vasco Road and the Byron Highway. The status of these widening projects (including Alameda County's opposition to widening of Vasco Road) is described on page IV.C--56 of the Draft EIR. Please note that, while Alameda County has stated its opposition to the Vasco Road widening, County staff has not indicated similar objections to the Byron Highway widening (see comment letters 17 and 72).

- 74.55 Please be advised that the draft Habitat Management Plan was prepared and submitted as part of the project application. The Plan is available for review at the County's Community Development Department. As a result, the Plan is not a "future study or plan," as suggested by the comment. The County has adopted a Right-To-Farm Ordinance. See Master Responses A and B regarding use of the Master EIR, separation of current project CEQA needs from subsequent project CEQA needs, and the use of future study as mitigation in a Master EIR.
- 74.56 The comment questions the conclusions in the Draft EIR that water and sewer service impacts would be reduced to a less-than-significant level. In response to this comment and other comments, changes have been made to acknowledge that the mitigation of some of the potentially significant environmental water impacts cannot be determined until a future date. As a result, with respect to some of the impact for which mitigation is not known to be feasible at this time, the mitigation conclusion has been changed to state that consistent with the Master EIR approach, additional information will be required to adequately determine if the impact has been mitigated to an insignificant level. Thus, until further environmental review substantiates that the mitigation measures will reduce the impact to a less than significant level as expected, the impact will be listed as significant and unavoidable. Please refer to the response to Comment 2.23 for further discussion.

Consistent with the growth management standards contained in the County General Plan (page 4-11), the project application will be required to demonstrate that adequate water quantity and water quality can be provided before approval of a subdivision map.

- 74.57 Consistent with County General Plan *Growth Management Element* requirements, the project applicant must provide adequate police/sheriff protection and fire protection to serve the project. Confirmation of these requirements would occur at the time of subdivision map approval. The *Public Services and Facilities Plan* will identify funding for and phasing of adequate sheriff/police and fire protection services.
- 74.58 The commenter offers no justification as to why they believe that the information on school facilities and capacities presented in the Draft EIR was insufficient. However, this Final EIR contains updated enrollment and capacity information (see section IV, Revisions to the Draft EIR (Errata)). The updated information does not alter the meaning or conclusions presented in the Draft EIR.
- 74.59 Please refer to the response to Comment 28.03.
- 74.60 Please refer to the response to Comment 74.23 for discussion of the adequacy of the Draft EIR survey information and evaluation of the regional (cumulative) biological setting; and to the response to Comment 59.01 for discussion of project impacts on creek and channel habitats.
- 74.61 The Commenter does not provide evidence to substantiate the assertion that project impacts on biological resources cannot be mitigated to less-than-significant levels. In general, the permanent protection and management of over 2,700 acres of onsite open space, combined with other EIR-recommended mitigations, would reduce project-related impacts on specific plant and animal habitats to less-than-significant levels. Please note that section IV.A, Land Use, of the Draft EIR identifies the project-related and cumulative loss of open space as a significant unavoidable impact (*Impact LU-1*).
- 74.62 Section IV.D (Soils and Geology) of the Draft EIR identifies the general type and probable range of potential geologic/geotechnical impacts, assesses geotechnical feasibility of the proposed land use plan and conceptual grading plan, and indicates general conformance with the goals and policies of the *Safety Element* of the Contra Costa County General Plan. The recommended mitigation measures provide a level of detail appropriate for this Master EIR and are adequate to mitigate the impacts. As suggested by the comment, specific limits to areas where grading can occur will be identified when the County receives more precise project development plans and associated grading plans. Please refer to the response to Comment 69.03 for discussion of the General Plan policy regarding development and grading in areas with slopes of over 26 percent. As discussed in that response, the policy does not

prohibit development on slopes of over 26 percent based on a Board of Supervisor's interpretation.

- 74.63 The Draft EIR includes the following mitigation measures that address areas of the project site where development may be unsuitable and/or should not occur:
- *Mitigation AG-1* recommends redesign of the project to avoid urban development on prime agricultural lands. (See Draft EIR, page IV.B--21.)
 - *Mitigation SG-8* recommends avoidance of areas that are inappropriate for mass grading. (See Draft EIR, pages IV.D--45 through IV.D--47.)
 - *Mitigation D-5* recommends locating all project structures outside the 100-year flood plain of Briones Creek. (See Draft EIR, page IV.E--26.)
 - *Mitigation BR-6* recommends revision of the project plans to avoid urban development in areas that contain special status plants. (See Draft EIR, pages IV.G--43 through IV.G--44.)
 - *Mitigation V-2, Mitigation V-3, Mitigation V-5, Mitigation V-7, Mitigation V-8, and Mitigation V-9*, recommend amendment of the *Cowell Ranch P-1 Planned Unit District Development Standards* to include hillside development standards that preserve significant land forms or hilltops. (See Draft EIR, pages IV.J--37, IV.J--38, IV.J--43, IV.J--47, IV.J--49, and IV.J--50.)
 - *Mitigation V-4, Mitigation V-6, and Mitigation V-9* recommend elimination of urban development in Planning Area 61. (See Draft EIR, pages IV.J--40 through IV.J--41, IV.J--45, and IV.J--50.)

These measures encompass the suggestions in this comment. In addition, the "Mitigated Alternative" evaluated in section V, Alternatives to the Project, presents a series of modifications to the project site plan that would assist in reducing the project's impacts.

- 74.64 The suggestion made by the commenter is already included in the EIR, as stated in Response 76.63. In addition, the recommendations in the Draft EIR pertaining to avoidance of specific land (land outside the ULL, prime soils) relate to maps in the document which clearly show the location of these areas (i.e., Figure 26 of page IV.B--19).
- 74.65 The Draft EIR includes onsite/job housing targets for five year buildout increments on pages IV.A--59 and 60. In addition, mitigation measures LU-11 already recommends that a limit be imposed on the issuance of residential building permits if it is determined in reviewing ten Employment Development Program Progress Report that the jobs-per-employed resident targets have not been met.
- 74.66 Consistent with the comment, the Draft EIR (page IV.G--50) acknowledges that sufficient compensatory habitat for San Joaquin kit fox may not be present on the

project site if the project is built as proposed and that additional compensatory habitat may be required off-site. Project impacts on other species would be mitigated onsite. Please refer to response 51.02-51.04, 51.07-51.12, 59.01(b) and (c), 59.08-59.11, and 59.13-59.20.

- 74.67 As suggested by the comment, a high school site has been identified. Please refer to the response to Comment 28.03.
- 74.68 The "regional mechanisms" suggested by this comment to mitigate significant cumulative impacts of the project are important concepts that should be considered by County decision-makers in the project review process; however, these mechanisms would not serve to mitigate project or cumulative impacts to a less-than-significant level. For example, while "more aggressive" infill policies could encourage additional infill development, project and cumulative impacts on regional air quality and on traffic conditions on certain roadways would remain significant, unavoidable impacts, as identified in the Draft EIR. Similarly, establishment of a regional habitat protection or conservation plan may assist in protecting certain habitat areas, but may not necessarily mitigate for the project-related open space and wildlife habitat loss. Please refer also to the response to Comment 70.09.
- 74.69 Please refer to the responses to Comments 74.05 and 2.22.
- 74.70 The conclusions stated on page V-46 of the Draft EIR regarding the environmentally superior alternatives to the proposed project are based on the alternatives analysis presented on pages V-1 through V-46 (i.e., 46 pages of analysis).
- It is not clear on what basis the commenter asserts that the analysis is simply "bare conclusions and options." The commenter is referred to one analysis provided on pages V--1 through V--46 of the Draft EIR.
- 74.71 There is no requirement under CEQA that a mitigated alternative address "...all of the significant impacts of the project." Chapter V of the EIR presents a reasonable range of alternatives by presenting six alternatives to the proposed project and meets all other requirements stated under CEQA Guidelines Section 15126 (d) regarding alternatives.
- 74.72 There are innumerable schemes that could be presented as alternatives to the proposed project, including the one described in this comment. However, chapter V of the Draft EIR already meets the requirements of CEQA Guidelines Section 15126 (d) by presenting a reasonable range of alternatives.
- 74.73 The Greenbelt Alliance Contra Costa County: Land Use or Abuse? report was submitted as an attachment to comment letter #74. The report does not contain comments on the adequacy or completeness of the Draft EIR. Accordingly, the report submittal is noted, and no further response is necessary.

75. Robert and Janis Boyer, 3041 Hudson Drive, Brentwood; February 14, 1997

- 75.01 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Land use	IV.A.4	Yes
Traffic	IV.C.4	Yes
Public services (water, police, fire services)	IV.F.1, IV.F.3, IV.F.4	Yes
Biological resources (plant and wildlife habitat)	IV.G.4	Yes
Air quality	IV.K.4	Yes

76. Barbara A. Alexander, 1980 Montclair Circle, Walnut Creek; February 24, 1997

- 76.01 The commenter's concerns regarding the significant impacts of the project and associated infrastructure funding are discussed in this response and in Responses 76.02 through 76.09 that follow. Please refer to Mitigation PF-18 on pages IV.F-81 and -82 of the Draft EIR which requires the applicant to "...submit a project *school financing and cost distribution plan*, to be established prior to the recording of each subsequent final subdivision map, which demonstrates to County (or City) satisfaction that sufficient funding will be available as and when needed to construct school facilities sufficient to comply with applicable county or City policies and standards." Mitigation PF-18 also identifies options for conventional school financing mechanisms to cover the costs of providing school facilities for the project.
- 76.02 Funds collected through the East County traffic impact fee levies on development that occurs in the area are allocated to improvements throughout the East County. This fee varies within the East County based on development impacts on various facilities. In addition, many of the improvements recommended as mitigation in the Draft EIR would be funded through the project development approval process.
- 76.03 The proposed project design lists a number of components that are designed to encourage the use of transit to and from the project, including the provision of shuttle buses and an adequate number of bus stops. These provisions are designed to encourage the provision of transit service from the local transit agencies, especially Tri-Delta Transit. As recommended in *Mitigation T-12*, the project applicant should coordinate the provision of transit service with these transit operators. Additional requirements to guarantee adequate operation of transit services may be considered as part of *Mitigation T-12*. Please refer to the responses to Comments 30.13 and 84.19 for discussion of transit funding.
- 76.04 The Draft EIR states that traffic impacts on State Route 4 and Vasco Road would constitute significant unavoidable impacts. Thus, for the proposed project to be approved, a Statement of Overriding Considerations would be required due to these impacts to State Route 4.
- 76.05 The project proposes closure of a portion of Marsh Creek Road and conversion of the roadway to a pedestrian/bicycle/equestrian trail (see Draft EIR, page III--31). The Draft EIR identifies the traffic impacts associated with this road closure, and recommends mitigation measures (see *Impact T-3* and *Mitigation T-3*, Draft EIR pages IV.C--61 through IV.C--62). In making a decision on the proposed project, the Contra Costa County Board of Supervisors will consider the potential drawbacks and benefits of this proposed road closure.
- 76.06 *Mitigation T-10* requires submittal of the project's proposed development standards to the Contra Costa County Public Works Department for review and approval. Through

this process, the County will ensure compliance with cross section requirements for various street classifications.

The commenter's statements regarding the "less than well-intentioned effort" and "cost-cutting measures" by the project applicant are Statements of Opinion that do not relate to the adequacy and completeness of the EIR.

Mitigation T-7 calls for shortening the proposed cul-de-sac in Planning Area 32 to a maximum length of 600 feet, or providing a secondary access.

Mitigation T-8 calls for revision of the project site plan to provide a separate access to the community college.

Mitigation T-9 calls for review of proposed Y-shaped intersections at the time of submittal of detailed site development plans, and consideration of alternatives that would eliminate these intersections.

76.07 Ongoing funding for police protection is addressed in mitigation measure PF-8 on page IV.F--50 of the EIR. Ongoing funding for fire protection is addressed under mitigation measure PF-11 on page IV.F--56 of the EIR. Please refer to page IV.F-56, which identifies two mechanisms available for funding the fair share costs of fire protection: (1) form of a Community Services Area (CSA) within which a special tax would be levied on project residents and (2) establish a fire flow tax which would be levied on project residents similar to the tax established in the Moraga Fire District.

76.08 The comment asks about participation in funding of sewage and water treatment facilities.

The mitigation measures in the Draft EIR specify that the project applicant shall either construct or provide "fair share funding" of the construction costs for onsite and offsite sewage and water facilities needed to serve the project. Ultimately, the people who purchase and develop properties within Cowell Ranch would pay for these facilities through the purchase price and/or property assessments.

76.09 See response to comment 39.27.

76.10 The comment asks about who is responsible for future flooding impacts to property owners within the project area.

Portions of Marsh Creek and Briones Creek are identified as areas within the project that are subject to flooding. The Draft EIR includes mitigation measures that would require the elimination of these flood hazards and/or the location of any buildings to be above the limit of the 100-year floodplain. Flood damage could potentially occur from flood events larger than the 100-year storm; and, as in most situations, the costs

would be borne by the property owner, unless they were to have some type of insurance coverage for catastrophic flooding conditions beyond the 100-year event.

- 76.11 The comment asks about measures for the protection of water quality.

The commenter is referred to pages IV.E--30 through IV.E--34 of the Draft EIR for discussion of impacts and mitigation measures related to non-point source pollutants associated with runoff from the proposed golf course and urban areas.

- 76.12 The comment asks about provisions for funding the required expansions to the Brentwood water supply system needed for the project.

The project applicant would be responsible for funding the water system expansion needed for the project. Additionally, as pointed out in Comment 78.51 by the City of Brentwood, the applicant would also be responsible for the costs of updating the City's Infrastructure Master Plans, including that which pertains to water supply facilities.

- 76.13 Blue oaks seedlings can be established in suitable locations to replace existing blue oaks. The project would result in a temporary loss of habitat value, since seedling blue oaks would not duplicate the habitat value of existing oaks for many years. For this reason, the Draft EIR (*Mitigation BR-2*) requires replacement at 3:1 and 5:1 ratios. The habitat management plan addresses all habitats of the proposed open space preserve that would, in fact, remain after the project is completed. The intent of the habitat management plan is to improve habitat values. Please refer also to the response to Comment 59.06.

- 76.14 As explained on Draft EIR pages IV.B--21 and 22, the EIR conclusion is that the project-related contribution to cumulative losses of agricultural land cannot be mitigated to a less than significant level.

- 76.15 As explained on Draft EIR page III--16, the preliminary development plan proposes development of 1,269 acres, or approximately 30 percent of the 4,277-acre project site, with the remaining 3,008 acres retained as permanent open space. Mitigations for impacts on state park lands (the John Marsh home is the only affected "state park" land resource) are included under appropriate environmental topic areas (visual factors, noise, etc.) throughout the EIR; see response to comment 57.02.

- 76.16 Seismic hazards are common to the region. The EIR specifically requires detailed identification of ground failure hazards and implementation of appropriate mitigations such as avoidance of hazard areas, ground improvement to eliminate the hazard, or structural design to accommodate hazard.

- 76.17 Comment noted. The preceding responses address the specific concerns raised by the commenter.

77. Merry L. Nail, 3900 Sellers Avenue, Brentwood; February 25, 1997

77.01 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Land use	IV.A.4	Yes
Traffic	IV.C.4	Yes
Public services (schools, police service)	IV.F.3 and IV.F.6	Yes
Biological resources (wildlife habitat)	IV.G.4	Yes
Air quality	IV.K.4	Yes

**78. Mitch Oshinsky, Community Development Director, City of Brentwood;
February 25, 1997**

78.01 CEQA Guidelines section 15152(a) states that *"agencies are encouraged to tier EIRs which they prepare for separate but related projects including general plans, zoning changes, and development projects."* It is important to note that this CEQA Guidelines section encourages, does not require, tiering of EIRs. Section 15152(b) states that, where an EIR has been prepared for a program, plan, policy, or ordinance, any lead agency for a later project should limit the EIR on the project to effects that *"(1) were not examined as significant effects on the environment in the prior EIR; or (2) are susceptible to substantial reduction or avoidance by the choice of specific revisions in the project, by the imposition of conditions, or other means."* CEQA section 21083.3 also establishes this general approach, stating that environmental documents for later projects should be *"limited to effects upon the environment which are peculiar to the parcel or to the project and which were not addressed as significant effects in the prior environmental impact report, or which substantial new information shows will be more significant than described in the prior environmental impact report."* In this case, the Cowell Ranch EIR identifies potentially significant impacts that were not addressed in the Brentwood General Plan EIR for certain environmental topic areas, and that are susceptible to reduction or avoidance through revisions to the project and/or conditions of project approval. In some cases, substantial new information (e.g., traffic data) has become available since the Brentwood General Plan EIR was prepared in 1993.

As stated in the Draft EIR (page III--10), the current project applications *"anticipate, but are not contingent upon, eventual annexation of all or a part of the project urban areas to the City of Brentwood."* Since the project as currently proposed does not include annexation to the City of Brentwood, Contra Costa County, as the lead agency, is required to conduct an independent environmental review of the project. However, as noted by this comment, eventual annexation to Brentwood is anticipated. Accordingly, the Draft EIR evaluates and distinguishes between impacts that would occur (1) if the project were developed in unincorporated Contra Costa County, and (2) if the project were developed within the City of Brentwood. Please refer, for example, to section IV.F (Public Facilities and Services), which identifies impacts on both City of Brentwood services (e.g., Brentwood Police and Fire Department services) and unincorporated county services (e.g., Contra Costa County Sheriff's Department, East Diablo Fire Protection District services). The identification of the County's guiding principles for development of the Cowell Ranch (Draft EIR, page III--9) is not inconsistent with this approach to the evaluation of the environmental impacts of the current project application.

78.02 The project application does not include annexation to the city. Annexation may or may not occur. This eventuality is appropriately addressed in the EIR. The EIR evaluated and distinguished between the impacts that would occur if the project were

to remain in the unincorporated area or if it were to be annexed to the City of Brentwood.

The point made in the Draft EIR under *Impact LU-4* that the project may become a distinct, self-sustaining community pertains primarily to the land use mix, physical layout, and scale of the preliminary plan. The comment is acknowledged that annexation would provide a means of direct city control over these project land use impacts, and would help to reduce this impact to a less than significant level.

There is no specific land use impact identified in the Draft EIR that warrants annexation to the city of Brentwood as a mandatory mitigation. Section IV.F of the EIR (Public Facilities and Services) advocates annexation to the city as a mitigation alternative for treated water supply (*Impact PF-1*) and wastewater treatment capacity impacts (*Impact PF-6*).

- 78.03 Please refer to the response to comment 78.01 and 78.02, above.
- 78.04 No Brentwood annexation request has been included in the project description. The prospects for annexation of portions or all of the project are carefully described in the Draft EIR, and in that light, the Draft EIR has been designed and prepared to provide the necessary CEQA documentation for such annexation(s). Preparation of the document was completed with substantial ongoing consultation with city staff. The Draft EIR includes a full discussion of project relationships to pertinent city General Plan policies and identified environmental concerns. In addition, potential city mitigation implementation roles in the event of annexation are identified in the Draft EIR. (See Draft EIR pages I--1, I--2, II--2, II--65, II--67, III--44, III--45, III--46, III--47, III--48, III--49; IV.A--28, IV.A--34, IV.A--35, IV.A--36, IV.A--37 through 44, IV.B--16, IV.C--24, IV.D--27, IV.E--14 and 15; IV.F--1, 2, 6-11, 14; etc.). Please note that the Principles and Guidelines for Cowell Ranch document to which this comment refers is an administrative direction given to County staff to consider during the processing of development applications; the EIR provides information on this document, but does not treat the principles and guidelines as "significance criteria" for purposes of analyzing project impacts and recommending mitigation.
- 78.05 As stated in the Draft EIR (page III--10), the current project applications "*anticipate, but are not contingent upon, eventual annexation of all or a part of the project urban areas to the City of Brentwood.*" However, as suggested by this comment, eventual annexation to Brentwood is anticipated. Accordingly, the Draft EIR evaluates and distinguishes between impacts that would occur (1) if the project were developed in unincorporated Contra Costa County, and (2) if the project were developed within the City of Brentwood. Mitigation measures that involve development standards also refer to both County and City standards, where appropriate. Examples include the following:

- *Mitigation LU-5* refers to the need to establish planned development zoning regulations for project commercial areas, with early participation by and coordination with the City of Brentwood. (See Draft EIR, page IV.A--42.)
- *Mitigation LU-11* recommends City of Brentwood involvement in the *Employment Development Program* to be formulated and submitted by the project applicant. (See Draft EIR, page IV.A--59.)
- *Mitigation T-1* refers to the need for compliance with adopted roadway system performance standards, based on County, City, and/or Contra Costa Transportation Authority traffic forecasting procedures. (See Draft EIR, page IV.C--53.)
- *Impact T-10* identifies project inconsistencies with City of Brentwood street standards, and accompanying *Mitigation T-10* provides for review of the proposed *Cowell Ranch P-1 Planned Unit District Development Standards* to achieve compliance with these standards. (See Draft EIR, pages IV.C--66 through IV.C--67.)
- *Mitigation PF-3* and *Mitigation PF-5* refer to the need to comply with City of Brentwood standards for water distribution and wastewater collection facilities, if the project site is annexed to the City of Brentwood. (See Draft EIR, pages IV.F--24 and IV.F--40.)
- *Impact PF-15* and accompanying *Mitigation PF-15* identify the need for project compliance with park standards established by the Brentwood Park and Recreation Master Plan. (See Draft EIR, pages IV.F--68 through IV.F--69.)
- *Mitigation V-7* requires special landscaping in accordance with City of Brentwood-proposed landscape plans for the SR 4 Bypass corridor. (See Draft EIR, page IV.J--47.)
- *Mitigation N-1* refers to the need to achieve compliance with City of Brentwood noise control criteria. (See Draft EIR, page IV.L--21.)

As suggested by Comment 78.93 below, the County may wish to consider establishing procedures for a cooperative mitigation monitoring effort among responsible agencies. This might be accomplished, for example, by designating a County staff project monitor who would be responsible for overseeing implementation of the mitigation measures recommended in the EIR. This monitoring effort would ensure that development standards recommended as mitigation and imposed on the project are acceptable to the City of Brentwood.

- 78.06 The prospective annexation rezoning, and rezoning aspects are fully acknowledged and adequately discussed in the Draft EIR. Please also see response to comment 78.04.

- 78.07 An application for a development agreement is on file with the County. The development agreement will only implement and secure the current project applications, if approved, which include a general plan amendment, rezoning and preliminary development plan. These applications have been analyzed in the Master EIR. The development agreement is not expected to create any additional environmental impacts that have not been addressed in the Master EIR. If it is determined that the development agreement causes an adverse significant environmental impact that has not been analyzed or mitigated by the Master EIR, then subsequent environmental review will be required consistent with the Master EIR process.

As stated on page III--44 of the Draft EIR, this Master EIR addresses the potential environmental impacts of required jurisdictional approvals, including development agreement approval. The development agreement can include all the conditions of approval and the mitigation measures that will be required of the project. If the conditions and/or mitigation measures are not set forth in the development agreement, the applicant will still be required to comply with the conditions and mitigation measures if they are imposed on the project through its approval. If the project site is annexed to another jurisdiction, and that jurisdiction utilizes the Master EIR before approving any discretionary projects, that jurisdiction must consider imposing the measures set forth in the Master EIR before annexation is approved. In addition, according to state law, if a development agreement is approved by the County and the project site is thereafter annexed to a city, the development agreement will remain valid for the duration of its term or eight years from the date of the annexation, whichever is earlier. The City of Brentwood has been provided a copy of the proposed development agreement. Any other jurisdiction, agency or individual can obtain a copy of the development agreement from the Contra Costa County Community Development Department. See response to comment 30.16.

- 78.08 *Mitigation T-10* requires submittal of the project's proposed development standards to the Contra Costa County Public Works Department for review and approval. Through this process, the County will ensure compliance with cross section requirements. Language has been added to *Mitigation T-10* to indicate that, in the event that the project is annexed to the City of Brentwood, the City would be responsible for review and approval of the project's roadway plans.
- 78.09 Comment acknowledged. In response to this comment, the discussion of *Mitigation LU-1* has been augmented to indicate that the City of Brentwood General Plan EIR also identified the loss of open space due to south Brentwood planning area urbanization as a significant, unavoidable impact. While the City of Brentwood may have already acknowledged that implementation of its General Plan would result in the loss of open space, it is still appropriate to identify the project-specific open space loss as a significant, unavoidable impact in the County's EIR on the Cowell Ranch project.

- 78.10 The current project application does not include annexation to Brentwood, but the Draft EIR properly anticipates that annexation may happen. Please see responses to comments 78.04, 58.06, and 85.11.
- 78.11 The county is the lead agency for the Cowell project. The county did not certify the Brentwood General Plan EIR, an action it would need to do it if was to defer to the Brentwood GP EIR for any county-action CEQA environmental review compliance purposes.
- 78.12 There is no identified environmental basis justifying the control of project buildout "to be consistent (or inconsistent) with city population growth between 1997 an 2010." Regarding the individual points in this comment:
- (1) The Draft EIR acknowledges the difference between the Brentwood and ABAG population projections, explaining that one reason is the omission of SPA "J" growth trends from the ABAG data. This aspect has no bearing on any physical environmental impact finding or mitigation finding in the Draft EIR.
- (2) Comment acknowledged. See response to comment 67.34.
- (3) Please see response to (1) above.
- 78.13 All of these considerations can be made in the post-Draft EIR process of developing the required housing strategy specifics.
- 78.14 The comment by Brentwood's Community Development Director states that the Draft EIR under *Impact LU-4* ignores the fact that neighborhood business centers and employment centers along the State Route 4 Bypass are provided for in the Brentwood General Plan, which promotes the "village concept." The comment also states that the Cowell Ranch village centers should be no different than others anticipated in the City's General Plan "so long as the City of Brentwood is in control of project review and approval." The comment then states "should the area remain unincorporated, however, the types of impacts identified in the DEIR are appropriate ones to be concerned about." Since the project as currently proposed does not include annexation to Brentwood, the *Impact LU-4* finding in the Draft EIR is supported by this comment.

In addition, the commenter states that *Mitigation LU-4* needs to be amended to indicate that the project could be reduced and still be consistent with Brentwood's General Plan, and that the commercial centers may not need to be eliminated; they could merely be designed to be in scale with any reduction in the overall project, and planned to provide service to Cowell residents, while avoiding competition with downtown businesses. In response, *Mitigation LU-4* has been revised in the EIR errata herein to require County consultation with the City in its decision-making regarding the project internal land use mix and its relationship to Brentwood (as

suggested by the commenter). Also, given the policies of the Brentwood General Plan regarding development along the State Route 4 Bypass, and the potential for the project to be consistent with those policies, with adequate City consultation, *Mitigation LU-4* has been revised to indicate that this impact could be reduced to a less than significant level through such consultation. Eventual annexation of the project to the city would have a similar mitigating effect.

See errata herein for EIR pages IV.A--39 and 41.

- 78.15 *Impact LU-5*, the potential impacts of project commercial development on the viability of future commercial development in Brentwood, represents a significant economic concern, but does not represent a significant environmental impact. CEQA Section 15131 stipulates that the economic effect of a project shall not be treated as a significant effect on the environment unless the EIR may trace a chain of cause and effect from a proposed project decision to a physical change caused in turn by the economic change. No evidence has been identified regarding such a chain of cause and effect under *Impact LU-5*. The mitigations as described under *LU-5* are advisory rather than required under CEQA, and contain sufficient wording for this advisory purpose. Please also see response to comment 85.24.
- 78.16 The county would need to certify the Brentwood General Plan EIR in order to use these findings for project CEQA compliance. Alternatively, the County has chosen to prepare its own Master EIR for the project.
- 78.17 In response to this comment, *Mitigation LU-7* on Draft EIR page IV.A--47 has been revised to make the John Marsh Historic Trust, Inc., an advisory rather than an approving agency.
- 78.18 The *Mitigation T-1* performance standard requirements described on Draft EIR pages IV.C--53 through 59 would be expected to prevent the suggested building of some unspecified number of dwelling units in the initial one year period. Please note that the discussion of *Mitigation LU-11* (Draft EIR, pages IV.A--59 through IV.A--61) has been amended to incorporate the commenter's suggestions regarding EDP administration.
- 78.19 Although the EIR preparers have determined that transit use is a realistic mitigation component, the transportation analysis traffic projections conservatively assume low transit use. With respect to implementation financing, please see response to Comments 39.27 and 69.07. As noted in the discussion of *Impact LU-12*, (Draft EIR, page IV.A--62) the project proposes a pedestrian, bicycle, and hiking trail system.
- 78.20 The language under *Mitigation LU-14* is as follows: "Implement the Cowell Ranch P-1 Planned Unit District Development Standards proposed by the applicant and additional design criteria as necessary to address..." (underline added). The commenter's suggestion is focused on the implementation of the mitigation measure rather than the

adequacy of the Draft EIR. The County may consider this comment as part of the decision on the project.

- 78.21 Comment acknowledged. The City of Brentwood General Plan EIR (July 1993; pages 96-99) concluded that the loss of prime farmland would represent a significant unavoidable impact of General Plan implementation. See section IV Errata for page IV.B--16 which incorporates this information. The revision does not substantially affect the EIR conclusions.
- 78.22 Please see response to comment 2.35. The suggestions made by the commenter have been incorporated into the discussion of *Mitigation AG-3* (see section IV, Revisions to the Draft EIR (Errata)).
- 78.23 The impact finding involves anticipated similar requests by other property owners in the remaining northeast portions of SPA "J" after a county approval of the project requests. The reasons for this determination are adequately explained on Draft EIR page IV.B--26, fourth paragraph, notwithstanding the Laurel Heights decision. These lands have been designated for urban use in the Brentwood General Plan, and their potential for urban development has been anticipated and addressed in the Brentwood General Plan EIR (see response to comment 84.12). Please refer to the revisions to the discussion of *Impact AG-5* for further clarification of this issue (see section IV, Revisions to the Draft EIR (Errata)).
- 78.24 The standards of significance employed in the Draft EIR (as in all Contra Costa County environmental documents) are based on a comparison of future year conditions with and without the proposed project. Moreover, the evaluation criteria require future/projected intersection or roadway operation at specific levels of service. The future year projections are independent of the "existing conditions" data, as the East County model is calibrated to 1990 traffic volumes. Essentially, the existing conditions analysis is provided for informational purposes only, and has no bearing on the future year results that are used in determining future levels of service at study area intersections and road segments.
- 78.25 The significance criteria employed in this analysis are based on maintaining future roadway system operation at some minimum level of service. Specifically, the standards are as follows:
- Unsignalized intersections: LOS E,
 - Signalized intersections: LOS C, D, or E (depends on type of land use - rural, suburban, urban, etc.),
 - Two-lane roads: LOS D, and
 - Freeways: LOS E.

The specific roadway segments on which significant unavoidable impacts have been identified are projected to operate at unacceptable levels of service regardless of whether the Cowell Ranch project is developed. As shown on Tables 26 and 27 of the Draft EIR, the referenced sections of State Route 4, the State Route 4 Bypass, and Vasco Road are projected to operate at LOS F, even under the "without project" scenarios. This is true in both the Year 2010 and Year 2026 scenarios. Thus, incremental reductions in the magnitude of Cowell Ranch land use would have no effect in terms of eliminating these impacts. (It should also be noted that conditions on Vasco Road are subject to policy considerations involving adjacent jurisdictions, with regard to the ultimate width of the roadway.)

The comment further implies that the proposed project should implement additional mitigation measures to eliminate these significant, unavoidable impacts. In this regard, it should be noted that the project would contribute fees (City and regional) and specific road improvements in proportion to its "fair share" of the future year impact. Because of the background (i.e., non-project) growth, these contributions would be insufficient to improve the specific locations identified to acceptable operation. This is what makes the impacts not only significant, but unavoidable. To require the project to make financial or improvement contributions that exceed its fair share would violate the legal "nexus" requirement and would, therefore, constitute an illegal exaction.

Three alternatives to the proposed project (the no project alternative, the general plan amendment alternative, and the North Livermore alternative site), would eliminate *Impact T-1*. There are an innumerable number of schemes that could be presented as alternatives to the proposed project, including the one described in this comment. However, chapter V of the Draft EIR already meets the requirements of CEQA Guidelines Section 15126 (d) by presenting a reasonable range of alternatives.

The commenter requested a traffic analysis of a reduced project in 500 dwelling unit increments. A traffic analysis of the Mitigated Alternative, which reduced the project by 750 dwelling units, was prepared after the Draft EIR was released and is included in Appendix C of this Final EIR. The findings indicated that the 750-unit reduction in the project would have relatively little effect on traffic operations of the roadway system serving the project; the same intersections would require the same improvements identified in the Draft EIR.

- 78.26 Construction of the State Route 4 Bypass will provide relief to local streets in the City of Brentwood. The analysis referred to in comment 78.25, which found unacceptable levels of service on certain roadway segments regardless of whether Cowell Ranch is developed, also demonstrates that construction of the Bypass is needed not just to accommodate project traffic, but future background (i.e. non-project) traffic, as well.

The phasing of Bypass improvements is dependent upon a number of factors that are beyond the control of the Cowell Ranch project. In particular, the availability of

funding from other public and private sources will have a substantial bearing on the timing of the Bypass improvements. In accordance with *Mitigation T-1*, the Cowell Ranch project applicant(s) would contribute the project's fair share to all required improvements, so that construction on the project site would assist in enabling the Bypass to be constructed. Please refer to the response to Comment 30.04.

- 78.27 As applied in the Draft EIR, LOS E equates to operation at 94 to 100 percent of the roadway's actual capacity. It is important to recognize that operation at LOS E is considered "acceptable" under the County's standards.

According to the *Highway Capacity Manual* (Transportation Research Board, Special Report 209, Third Edition, 1994), "At its lower boundary, LOS E describes operation at capacity. Operations in the level are volatile, because there are virtually no gaps in the traffic stream... Any disruption to the traffic stream, such as vehicles entering from a ramp or a vehicle changing lanes, can cause following vehicles to give way to admit the vehicle. This can establish a disruption wave that propagates throughout the upstream traffic flow. At capacity, the traffic stream has no ability to dissipate even the most minor disruptions, and any incident can be expected to produce a serious breakdown with extensive queuing. Maneuverability within the traffic stream is extremely limited, and the level of physical and psychological comfort afforded the driver is extremely poor."

The volatility inherent in operation at LOS E means that, for at a portion of the peak hour, the actual operation may be something other than LOS E. In particular, since the level of service analysis indicates the operational characteristics of the peak hour as a whole, it is possible that a roadway may operate at LOS D, E, or F at different times during the peak hour, with the overall condition "averaging out" to LOS E.

- 78.28 This comment suggests that additional field checking be performed at existing intersections. Verifying calculated level of service through field observations would not produce useful information, since intersection operations vary from one day to the next, and in growing areas such as East County, levels of congestion vary on an annual, if not a monthly, basis. Thus, additional field work would not provide comparable data. Furthermore, since intersection level of service calculations reveal the overall "average" operation for the peak hour, field observations would have to cover the entire peak hour, which would be a very costly process. Finally, as noted in the response to Comment 78.24, analysis of existing intersection levels of service is provided largely for informational purposes and does not affect the analysis of the project impacts.
- 78.29 Please refer to responses to Comments 78.24 and 78.28.
- 78.30 Table 18 only shows the estimated level of service since the derivation of level of service differs for the various roadway types. Different parameters are used to determine level of service on freeways and two-lane highways; freeway level of

service is based on volume-to-capacity (V/C) ratio while two-lane highways levels of service is based on vehicle speed. Because the relationship between speed and level of service varies depending on a number of roadway-specific factors, many segments cannot technically be assigned a vehicle speed.

- 78.31 Comment acknowledged. In response to this comment, additional accident data were gathered for the City of Brentwood and for other locations in eastern Contra Costa County (see Tables A and B). The standard methodology for computing accident rates was used and the resultant rates were compared with statewide averages. The standard methodology uses the average daily traffic (ADT) and the number of accidents at the intersection to determine the number of accidents per million vehicles. These accident rates are then compared to statewide accident rates for similar intersections (i.e., urban two-lane signalized intersections). Locations that have high accident rates compared to the state average are considered "hot spots" that should be evaluated for potential safety improvements. These data do not suggest any changes to the Draft EIR conclusions regarding project and cumulative traffic impacts, however.
- 78.32 Please refer to the response to Comment 47.13 for a discussion of how the land use assumptions for the year 2026 analysis were developed. A "worst-case" scenario (i.e., year 2026 land use assumptions with the year 2010 roadway network) was used to identify the study intersections evaluated in the Draft EIR traffic analysis.
- 78.33 Please refer to Master Response E, item (1). For the circulation analysis, all 2026 trip end projections were based on households, and assumed full occupancy of project housing. Because no demographic projections were available for the year 2026, the population per household estimate was not changed from 2010 (i.e., 3.01 persons per household in the aggregate for Brentwood). Persons per household by land use type and census tract vary within this aggregate number. The year 2026 estimates were based on buildout of General Plans; please refer to the response to Comment 47.13 for more discussion. Revision of Draft EIR Table 20 to reflect the City of Brentwood General Plan population buildout projections, as suggested by the commenter, would not affect the impact or mitigation conclusions presented in the EIR.

Regional employment data for traffic projections are provided by industry category (retail, service, other) rather than by wage or professional status; such information is not available for use in any Bay Area regional travel demand model.

- 78.34 The travel demand forecasting model used to perform the traffic impact analysis incorporates a large number of changes in the transportation network between the year 2010 and the year 2026. Those changes are detailed in Table 22 of the Draft EIR. The magnitude of the roadway network changes suggests several possible reasons for the apparent inconsistency in Vasco Road traffic volumes. The roadway system improvements assumed to occur between the years 2010 and 2026, as identified in Table 22, would make outer routes more convenient and attractive for

Table A
ACCIDENT DATA FOR THE CITY OF BRENTWOOD (1994-1995)

<u>Location</u>	<u>Type of Accident</u>								<u>Total</u>
	<u>Broad-side</u>	<u>Rear-end</u>	<u>Side-swipe</u>	<u>Head-on</u>	<u>Hit Object</u>	<u>Over-turn</u>	<u>Veh/Ped</u>	<u>Other</u>	
Oak/First	2	1	1	1				1	6
Oak/Third	5		1				1		7
Brentwood/Homecoming	1	1			1			2	5
Brentwood/Birch		2	3		1				6
Brentwood/Broderick	6	1	1	1					9
Brentwood/Oak	1	4	2		1		1		9
Brentwood/Sunset	2		2	2	3				9
Central/Minnesota	12				3			1	16
Brentwood/Spruce		3			2			2	7
Brentwood/Pine	1	2			3	5		1	12
Brentwood/Lone Tree	6	6	1		1				14
Brentwood/Gregory	2	4							6
Brentwood/Dainty	3	1	1				1		6
Brentwood/Central	3	6	1					1	11
Brentwood/Village	8	3	1	1	1		1		15
Brentwood/Second	3	4	2	1	2				12
Brentwood/Sand Creek	3	12			2				17
Brentwood/Balfour	10	9	2	1	1				23
Balfour/Walnut	7	3	4	1	3				18
Minnesota/Breakwater		1		1	2	1			5
Walnut/Carnegie	1	3			1				5

SOURCE: DKS Associates, 1997.

Note: This table lists all accidents listed in the *Statewide Integrated Traffic Records System (SWITRS)* data associated with each intersection.

Table B

ACCIDENT DATA FOR EAST CONTRA COSTA COUNTY (1994-1995)

<u>Location</u>	<u>Type of Accident</u>							<u>Total</u>
	<u>Broad- side</u>	<u>Rear- end</u>	<u>Side- swipe</u>	<u>Head- on</u>	<u>Hit Object</u>	<u>Over- turn</u>	<u>Veh/ Ped</u>	
Vasco/County Line	1	1		3	12	4		21
Balfour/Sellers	3	1	1			1		6
Camino Diablo/Vasco	6	8	2	4	17	8	2	47
Deer Valley/Chadbourn					4	2		6
Cypress/Sellers	5	5	3	1				14
Cypress/Route 4		6	2		3			11
Cypress/Jersey Island			2	1	6	1		10
Fairview/Lone Tree		16	2		7			25
Marsh Creek/Deer Valley		1	2	3	15	7	2	30
Marsh Creek/Camino Diablo	1	1		2	4			8
Marsh Creek/Morgan Territory		1	2	3	11	3	1	21
Marsh Creek/Orchard	4	1			1			6
Marsh Creek/Walnut	7	14	3		1	2		27
Sellers/Sunset	1	2			1	3		7
Bixler/Route 4	1		1		3			5
Byer/Bixler					7			7
Byron Highway/Camino Diablo	1	3		1		1	1	7
Deer Valley/Empire Mine	1	1			4	2	1	9
Cypress/Knightsen	3		1	1	2		1	8
Knightsen/Delta	2		1			2		5
Lone Tree/Anderson	3	1			1			5

SOURCE: DKS Associates, 1997.

Note: This table lists all accidents listed in the SWITRS data associated with each intersection.

motorists, resulting in a diversion of Vasco Road traffic to those other routes. Similarly, it may be that the anticipated development patterns during the 2010 to 2026 period will make other routes more convenient and attractive, again causing a diversion of traffic to those other routes. It should be noted that the difference referred to in this comment (a total of 217 PM peak hour vehicles) is a small portion of the overall number of trips in the study area during that time period.

Please refer to the response to Comment 52.10 for a discussion of how traffic may decrease on a roadway as a result of the Cowell Ranch project.

- 78.35 Please refer to the response to Comment 52.10 for a discussion of how traffic can decrease on a roadway as a result of the Cowell Ranch project.
- 78.36 Tables 32 and 33 of the Draft EIR identify mitigation measures for project impacts on the State route 4 Bypass. These mitigations would reduce the impacts to a less-than-significant level, and therefore additional measures, such as HOV/HOT lanes, are unnecessary for the State Route 4 Bypass.
- 78.37 Please refer to the response to Comment 9.14 for a discussion of the methodology to be used in assessing the projects' "fair share" of roadway improvements.
- 78.38 The Blackhawk development was approved after the Cowell Ranch Draft EIR was released, and includes significant circulation changes that affected *Mitigation T-2* and *Mitigation T-4* of the Draft EIR. In light of the current circulation of the approved Blackhawk development, the language and supporting text for *Mitigation T-2* and *Mitigation T-4* have been revised to:
- require the project to dedicate to the County right-of-way for Briones Valley Road along the project's frontage for a four (4) lane arterial (T-2); and prior to approval of a Final Development Plan, reconfigure the road circulation in the North Village to accommodate right-of-way for a realignment of the eastern end of Briones Valley Road arterial to connect directly with the proposed undercrossing of Fairview Avenue at the State Road 4 Bypass;
 - omit the language that references the preservation of a second crossing and east/west road extension east of State Road 4 Bypass (T-2); and
 - close the Marsh Creek Bridge as a through road when development west of the bridge or increased traffic occurs (T-4). The bridge will only be used as an emergency vehicle access (EVA) after it is closed.

Please refer to the revisions to *Mitigations T-2* and *T-4* in section IV, Revisions to the Draft EIR (Errata).

- 78.39 *Mitigation T-2* has been revised to read "... *Refinement of this mitigation measure should occur as part of Brentwood's planning for SPAs 'G', 'H', 'I', 'K' and the remainder of 'J'.*" (See section IV, Revisions to the Draft EIR (Errata).)
- 78.40 The proposed project identifies a majority of the portion of the site adjacent to Briones Valley Road as permanent open space. Project traffic would access the North Village subarea via a proposed arterial, Cowell Ranch Parkway, and an extension of Fairview Avenue (see Figures 6 and 9 of the Draft EIR). See response to Comment 78.38.
- 78.41 Comment noted. The Draft EIR traffic projections indicate that, in 2010, Marsh Creek Road north of Camino Diablo will carry 354 vehicles in the AM peak hour without the proposed Cowell Ranch project and 432 vehicles with the proposed project. In the PM peak hour, the traffic volume on Marsh Creek Road is estimated to be 261 vehicles without the project and 391 vehicles with the project. Thus, the project-related incremental increase in traffic on this roadway would represent a maximum of 130 vehicles per hour. It should also be noted that the closure of this section of Marsh Creek Road would not eliminate the demand for travel to and/or through the City of Clayton. The effect of closing Marsh Creek Road earlier in the development process would have little effect on traffic volumes in Clayton. Closures of Marsh Creek Road as part of initial project construction rather than in project Phase II may therefore be considered a policy decision, rather than a decision based on traffic considerations.
- 78.42 The purpose of *Mitigation T-4* is to reduce the amount of traffic on Concord Avenue in the *Agricultural Core*. The *Mitigation T-4* recommendations in the Draft EIR were consistent with the Brentwood General Plan at the time of Draft EIR publication. The General Plan amendment cited by this comment was approved after the Draft EIR was published. Please refer to the errata herein for Draft EIR pages II--16, II--17, IV.C--62 and IV.C--63 (*Mitigation T-4*). The City of Brentwood approvals and other roadway considerations mentioned by the commenter may be considered in more detail if the project is annexed to the City of Brentwood.
- 78.43 *Mitigations T-10* and *T-11* require that the project's development standards (including road cross sections and proposed bicycle and pedestrian facilities) be submitted to the County for review and approval. The specific circulation and urban design elements of Cowell Parkway and the other project roadways are being developed through applicant consultation with County and City of Brentwood staff, and will be refined further as the development process proceeds. As this occurs, the City will have opportunities to provide input relative to the configuration of Cowell Parkway. The comments pertain to project internal design recommendations--the design treatment of Cowell Parkway--which should be carefully considered by the applicant and County if the project proceeds. The comment does not pertain to the adequacy of the Draft EIR transportation impact and mitigation findings (*T-10* and *T-11*) or visual impact and mitigation findings.

- 78.44 Please refer to response to Comment 78.43.
- 78.45 Project impacts on Vasco Road capacity are well documented in the Draft EIR. The ultimate determination regarding appropriate improvements to Vasco Road is a political issue that cannot be solved by this Master EIR. The Draft EIR analysis identified a significant unavoidable impact on Vasco Road. However, through the mitigation process envisioned by *Mitigation T-1*, the project could be required to contribute fair share funding toward Vasco Road improvements based on the amount of project traffic that would use this facility. As indicated by the "significant unavoidable impact" conclusion in the Draft EIR, this measure would help to offset the project's contribution to traffic congestion on Vasco Road, but would not reduce the impact to a less-than-significant level. Another mitigation measure would be to provide additional capacity on the Byron Highway/Mountain House Road corridor. This measure would also help offset the project's contribution to traffic congestion on Vasco Road, but it would not reduce the impact to a less-than-significant level. The commenter has not provided evidence that the EIR evaluation of mitigation measures for Vasco Road is not adequate.
- 78.46 Comment acknowledged. In response to this comment, revisions have been made to the last paragraph on page IV.A--19 of the Draft EIR to indicate that this airport may provide "executive" air service to employment-generating land uses on the project site. (See section IV, Revisions to the Draft EIR (Errata)).
- 78.47 Comment noted. This comment is a statement of support for the project, rather than a comment on the adequacy or completeness of the Draft EIR. The County may consider the factors cited by this comment in making its decision on the project.
- 78.48 As stated on page III-48 of the Draft EIR, "One or more financing mechanisms may also need to be established to ensure timely completion and continued maintenance of public improvements. Numerous financing district and other financing mechanisms are possible, including lighting and landscaping districts, Mello-Roos districts, assessment districts, county service areas, community service districts, etc." Because a variety of standard financing mechanisms are available and are routinely implemented, the specific financing mechanism does not need to be identified in the EIR.
- 78.49 The comment questions the accuracy of the City of Brentwood pumping data cited in the Draft EIR. The information in the EIR is based on reasonably available data. There is no relationship between this information and the water supply impact analysis. The commenter has not provided evidence that the information cited in the Draft EIR is not consistent with City records.
- 78.50 Comment acknowledged. The comment suggests the addition of new wording to update the status of Brentwood's progress on its water supply plans. See response to Comment 19.07.

- 78.51 Comment noted. The comment asks that the EIR reflect the fact that the costs for updating any of the City of Brentwood Infrastructure Master Plans to accommodate the Cowell Ranch project would be the responsibility of the applicant.

Comment acknowledged. Wording to this effect has been added to the EIR in *Mitigation PF-3*. (See section IV, Revisions to the Draft EIR (Errata).)

- 78.52 Comment acknowledged. The comment asks that the EIR indicate that water supply for the project (as addressed in *Mitigation PF-1*) be provided only through annexation to the City of Brentwood. *Mitigation PF-1* has been modified accordingly.
- 78.53 The comment asks that *Mitigation PF-3* be reworded to indicate that water conveyance and distribution facilities would be totally within the jurisdiction and review authority of the City of Brentwood. This revision is not necessary to achieve the mitigation.
- 78.54 The comment asks that the EIR (as addressed in *Mitigation PF-5*) indicate that wastewater facilities for the project be supplied only through annexation to the City of Brentwood. This revision is not necessary to achieve the mitigation.
- 78.55 The project is not contingent upon annexation to the City of Brentwood for the use of the City sewer system. The EIR therefore analyzed sewer system impacts if the project is annexed to the City, as well as if the project remains in the unincorporated area. The focus of the mitigation measure is to ensure that sewer service is provided. Details on the financing of sewer services are not related to the adequacy of the EIR. *Mitigation PF-3* notes that the applicant is responsible for funding needed sewer improvements.
- 78.56 Comment acknowledged. The comment offers wording change to *Mitigation PF-6* to reflect that an onsite wastewater treatment and disposal system would require approval from the Regional Water Quality Control Board. The wording of *Mitigation PF-6* has been modified as suggested. (See section IV, Revisions to the Draft EIR (Errata).)
- 78.57 The impacts of the project on solid waste services would be less than significant. Page IV.F--96 of the Draft EIR does identify the City of Brentwood as a potential service provider. Provision of solid waste service is a routine matter that could be determined prior to approval of the tentative map.
- 78.58 The information provided in this comment has been added to the road maintenance setting section of the EIR.
- 78.59 There is no relationship between response time to the site and the number of calls received due to the project. It is routine for builders/contractors to establish security

measures so that construction materials and equipment are not stolen and vandalism is prevented, no such mitigation measures are needed in the EIR.

- 78.60 Mitigation measure PF-8 on page IV.F--50 provides for financing of additional one-time excess police facility costs, the measure specifies the following: "...the City and Applicant should evaluate the need for an onsite police substation. To fund any one-time excess police facility costs, the City *"shall ensure that impact fees are collected and shall work with the developers to establish mitigation measures to ensure that adequate facilities will be available,"* in accordance with Policy 1.3.4 of the Brentwood General Plan. In response to this comment, this language has been expanded to state that "...the City and Applicant should evaluate the need for an onsite police substation and other one-time excess capital police costs such as vehicles."
- 78.61 Please refer to the response to Comment 78.60.
- 78.62 The Draft EIR addresses impacts on the Contra Costa County Sheriff's Department if the project remains in unincorporated Contra Costa County (*Impact PF-7*) and impacts on the Brentwood Police Department if the project is annexed to the City of Brentwood. The commenter has not provided evidence to support the claim that, if the project were developed in unincorporated Contra Costa County, a "large number" of calls would be transferred to the Brentwood Police Department. Implementation of *Mitigation PF-7* would ensure that adequate Sheriff's Department service would be provided to the project.
- 78.63 *Mitigation PF-8* on page IV.F--50 of the EIR already specifies review and approval of the Police Public Services and Facilities Plan by the City of Brentwood. Therefore, this mitigation measure does not need to be expanded in response to this comment.
- 78.64 In response to this comment, *Mitigation PF-9* on page IV.F--51 of the EIR has been expanded to ensure that emergency access complies with City of Brentwood emergency access standards, including provisions for Knox lock boxes and appropriately designed curb cuts.
- 78.65 In response to this comment, page IV.F-52 has been revised to read that "The Contra Costa County Fire District is the closest neighboring agency to the project site, followed by the San Ramon Valley Fire District."
- 78.66 In response to this comment, page IV.F--52 has been revised to state that "Engine Company 52 is a paid on-call personnel station." and that "The station is equipped with two fire engines..."
- 78.67 Please refer to page III-48 of the Draft EIR, which identifies a number of mechanisms to maintain and finance fire buffers and fire breaks, including establishment of a landscape and lighting district. This is routine matter, typically resolved in the subdivision map process.

- 78.68 Please refer to page III-48 of the Draft EIR, which identifies a number of mechanisms to maintain and finance emergency access roads, including establishment of a county service area, community service district, landscape and lighting district, etc. This is routine matter, typically resolved in the subdivision map process.
- 78.69 The project community park impacts are adequately addressed in section IV.F of the Draft EIR.
- 78.70 Impacts associated with the overhead electrical transmission lines are addressed in section IV.M of the Draft EIR (Public Health and Safety).
- 78.71 As illustrated on Figure 8 on page III-19 of the Draft EIR, a pedestrian, bicycle, and hiking trail connect the Golf Course Residential, North Hills, and East Hills subareas to nearby neighborhood and community parks.
- 78.72 Pages IV.F-84 and -85 of the Draft EIR identify an onsite high school site as a possibility and indicate that subsequent environmental review would be required if this option were pursued. Please refer to the response to Comment 28.03.
- 78.73 The mitigations recommended in the Draft EIR adequately address the potentially significant environmental impacts of the project. The project applicant and the County (and/or the City of Brentwood) may wish to consider use of "Infrastructure Financing Districts" to fund various project-related infrastructure improvements, as suggested by the commenter.
- 78.74 Please refer to the response to Comment 85.96.
- 78.75 The computer-generated maps included in the Draft EIR fulfill their useful intent as follows:

The maps have been designed and generated to approximate areas of the site that may be visible (i.e., the approximate "viewshed") from various surrounding roadways, trails, and other important vantage points (see Draft EIR page IV.J--20). The Master EIR addresses a proposed change in General Plan land use designations. The purpose of these depictions is to provide the Lead Agency with general guidance with respect to focusing future project-specific design review (see Draft EIR page IV.J--21). The Draft EIR also states on page IV.J--21 that *"due to the conceptual nature of the proposed development plan, the analysis in this subsection is based on general conclusions regarding the visibility of proposed project development areas from the selected viewpoints."*

The maps depict those areas that do, and those areas that do not, warrant more focused consideration on a "case-by-case basis" during future design review

procedures that would be routinely required for individual development applications (subdivision) within the project area.

The descriptions in this comment of the reasons why (1) the Draft EIR conclusions of significant unavoidable impacts are "unsupportable," and (2) "the visual analysis should be redone" are in error. The "viewsheds" depicted and evaluated in the analysis were carefully selected in consultation with County staff, with the consent of City of Brentwood staff, based on thorough analysis and careful consideration of local visual characteristics, values, the number of current and future viewers, the sensitivity and vulnerability of viewpoints, pertinent County and City policies and concerns, and the proposed project characteristics. Obviously, the photos in the Draft EIR represent existing views as they appeared at the writing of the document. The photos in the EIR are clearly dated, and situations where future foreground development is anticipated are identified; however, this factor pertains to only two of the 15 photographs--photos 1 and 2).

The future foreground view blockage aspect is adequately explained and accounted for in the analysis (photo 1: page IV.J--4, paragraph 4; photo 2: page IV.J--4, paragraph 5). This aspect was also fully acknowledged and considered in developing the Draft EIR conclusions with respect to impact significance and mitigation need.

The visual analysis approach used in this Master EIR involving the development of computer-generated topographic depiction of areas of the project site visible from all of the various viewpoints of concern, rather than the approach suggested in this comment, which would use photomontage simulations of anticipated detailed project physical characteristics as they might be seen from various selected viewpoints, was carefully developed in consultation with County staff and the City of Brentwood's urban design consultant, Cannon Design Group. In addition, an administrative draft version of visual analysis, including the computer-generated maps, impact conclusions, and mitigation recommendations, was also reviewed by the City of Brentwood's urban design consultant, and related comments from the consultant were incorporated in the Draft EIR.

The visual analysis approach suggested here, "readily available visual simulation analysis" involving preparation of computer-generated photomontage simulations using typical ("commonly assumed") building envelopes and locations, is typically done by the County (and the EIR authors) for project-specific EIRs, but was specifically considered and rejected as an inappropriate approach for this Master EIR because:

- the approach could not be reasonably applied to address all of the many views of concern;
- the approach was considered inappropriate for a broad-based, large scale, general plan amendment Master EIR of this nature where no specific development projects designs have been submitted; and

- the alternative "viewshed" depiction approach that was used more appropriately identifies all areas of the project site visible from all vantage points of concern for use as an important tool in focusing all future project specific design review (i.e., to properly fulfill the purpose and intent of a Master EIR), rather than providing a much more speculative and limited depiction of selected views.

In fact, in the process of preparing the administrative drafts of the visual analysis, the suggested approach of using more detailed computer-generated photomontage simulations was tried and a number of preliminary simulations were developed. Based on the results, including their limited scope (selected views) and highly speculative nature (no specific development plan basis), these simulations were rejected for Master EIR purposes in favor of the more comprehensive "viewshed maps" approach.

The detailed project-specific photomontage visual simulations suggested in this comment may certainly be appropriate and within the proper scope of future, individual project-specific development review (individual subdivision applications, etc.), but would be inappropriate for Master EIR purposes and most importantly, would not change the visual impact conclusions and mitigation recommendations of this Draft EIR.

- 78.76 The comment is incorrect. The visual implications of noise walls are adequately considered and addressed on Draft EIR pages IV.L--22 (paragraphs 3 and 4).
- 78.77 Comment acknowledged. *Mitigations V-4 and V-7* already call for special setbacks and landscape treatments along Camino Diablo and the SR 4 Bypass, respectively. In response to this comment, the following additional language has been added to the description of *Mitigation V-1* (see errata in section IV, Revisions to the Draft EIR (Errata)): "Require modification and refinement of the project *P-1 District Development Standards* for streetscapes with project development area frontages (the SR 4 Bypass, Walnut Boulevard, Camino Diablo, Marsh Creek Road, and Briones Valley Road; see Figure 8 herein) to specify and emphasize special landscape treatments between the roadway and project buildings designed to retain a rural or semi-rural roadside character."
- 78.78 At the time the Draft EIR was prepared, two alternative alignments for the SR 4 Bypass were being considered by the County and the various other agencies responsible for planning the route: the "Modified County Alignment" and the "Modified Nunn Alignment." The preliminary development plan application addressed in this EIR assumes ultimate adoption of the "Modified County Alignment"; therefore, the Draft EIR impact findings assume the "Modified County Alignment" as part of the ultimate project layout. In addition, the implications of the alternative "Modified Nunn Alignment" are also addressed in section V.D of the EIR ("SR 4 Bypass Modified Nunn Alignment Alternative").

Therefore, in describing the visibility of the project site from the proposed SR 4 Bypass, the "Modified County Alignment" was assumed, including the anticipated approximate vertical height of that alternative at its grade-separated interchanges with Marsh Creek Road and Walnut Boulevard; the heights of these two interchanges were assumed to range from approximately 175 to 225 feet, respectively, based on preliminary information available from the county at the time of the Draft EIR writing. In response to this comment, a note to this effect has been included in the errata for page IV.J--30 (Figure 68) and page IV.J--46 in section IV (Revisions to the Draft EIR (Errata)).

- 78.79 The vertical height assumptions used in the Draft EIR for the SR 4 Bypass include the anticipated overpass heights.
- 78.80 Comment acknowledged. In response, the suggested reference has been added to page IV.J--51 of the EIR.
- 78.81 Contrary to the comment, a number of mitigations are described in the visual section to effectively address the issue of loss of rural character, including elimination of urban development in Planning Area 61 (*Mitigation V-4*); special setback and landscape treatment requirements (*Mitigations V-4* and *V-7*); hillside development standards that promote preservation of significant land forms or hilltops, reduction in development intensity, grading limitations on steep slopes, contour grading, revegetation and sensitive landscaping (*Mitigations V-2, V-3, V-4, V-5, V-6, V-7, V-8, and V-9*), and special roadside landscaping in accordance with City of Brentwood-proposed landscape plans for the SR 4 Bypass corridor (*Mitigation V-7*). In addition, in response to this and similar City comments (78.77), language has been added to *Mitigations V-4, V-5, V-6, and V-7* to place increased emphasis in the project's P-1 District Development Standards on the need for special landscape treatment between local roadways and project buildings, designed to retain a rural or semi-rural landscape character (see errata in section IV, Revisions to the Draft EIR (Errata), for pages IV.J--20, 40, 43, 45, and 47).
- 78.82 The comment suggests that the project sponsor should commit to mitigating their fair share of roadway noise on adjacent lands attributable to the proposed project adjacent to the SR 4 Bypass (the "Delta Expressway"), Concord Avenue and Orchard Lane. Noise levels along the SR 4 Bypass would be virtually unaffected by project traffic (see Tables 72 and 73 on pages IV.L--36 and IV.L--37 of the Draft EIR). A portion of the noise level increase anticipated along Concord Avenue in the future would be attributable to the project (3 dB of an 11 dB increase by the year 2010), as shown in Table 72 (page IV.L--36). No feasible mitigation measures were identified for Concord Avenue (see *Impact N-13* and *Mitigation N-13*). Noise level increases along Orchard Lane were not calculated, since this is a relatively small roadway that was not coded in the traffic model and is not expected to experience a significant traffic increase due to the project.

- 78.83 Environmental documentation for projects surrounding the project site, including the Back Nine project, were reviewed as background for preparation of the Cowell Ranch EIR. Measures recommended by this EIR to mitigate noise impacts associated with the PG&E station are believed to be appropriate based on extensive noise monitoring and analysis for this project.
- 78.84 Please refer to the response to Comment 78.82. Requirements for sound insulation for existing offsite homes, and/or sound walls or berms surrounding the homes, are typically not cost-effective or feasible, particularly for scattered rural residences that front on roadways. Sound walls, for example, would need to be very long in order to protect a single ranch house, and breaks in the wall necessary to allow vehicle access would reduce the wall's effectiveness as noise mitigation. The Draft EIR therefore concluded that cumulative traffic noise would represent a significant, unavoidable impact, recognizing that the noise characteristics of the area would change substantially, and that there is no practical mitigation available for this impact.
- 78.85 Comment noted. The Draft EIR assumes that all mitigation measures included in the draft Habitat Management Plan (DHMP) would be adopted as a condition of project approval and incorporated in the final HMP. Where mitigation measures described in the Draft EIR conflict with the DHMP, those measures included in the Draft EIR shall supersede those presented in the DHMP. The Draft EIR may also list additional mitigation measures that were not found in the DHMP. In this case, the DHMP should be revised to incorporate the additional mitigation requirements recommended in the Draft EIR. The DHMP is available for review through the Contra Costa County Community Development Department.
- 78.86 Please refer to the response to Comment 2.22 and 74.13 for discussion of the "reasonable range" of alternatives evaluated in the EIR. As noted on page V--38 of the Draft EIR, Alternative F was the subject of the original Notice of Preparation issued for the project, and *"is included in this EIR as a means of analyzing a range of options for development and to demonstrate the evolution of the applicant's development plan for the project site."*
- 78.87 Please refer to the response to Comment 78.25, which addresses the 500-unit reduction approach suggested by this comment. As noted in that response, three alternatives to the proposed project (the no project alternative, the general plan amendment alternative, and the North Livermore alternative site), would eliminate *Impact T-1*. There are an innumerable number of schemes that could be presented as alternatives to the proposed project, including the one described in this comment. However, chapter V of the Draft EIR already meets the requirements of CEQA Guidelines Section 15126(d) by presenting a reasonable range of alternatives.
- 78.88 There are an innumerable number of schemes that could be presented as alternatives to the proposed project, including the one described in this comment. However, chapter V of the Draft EIR already meets the requirements of CEQA Guidelines

Section 15126(d) by presenting a reasonable range of alternatives. Please refer also to the response to Comment 2.22.

78.89 Please refer to the response to Comment 78.88.

78.90 Please refer to the response to Comment 78.88.

78.91 As described on page V-16 of the Draft EIR, the mitigated project alternative would substantially reduce the visual impacts associated with the proposed project. Moreover, there are innumerable alternatives variations that could be presented in this EIR, including the variation described in this comment. Chapter V of the EIR presents a reasonable range of alternatives by presenting six alternatives to the proposed project and meets all other requirements stated under CEQA Guidelines Section 15126(d) regarding alternatives.

78.92 Please refer to the response to Comment 85.128. Tables 9 and 10 were current at the time of Draft EIR preparation, and provide an adequate level of detail at this (Master EIR) stage. In response to this comment, these tables have been reviewed and updated as necessary. These changes do not suggest any necessary revisions to the analysis of cumulative land use impacts presented in section IV.A (Land Use) of the Draft EIR.

78.93 The County, as the Lead Agency, is responsible for ensuring implementation of mitigation measures. In accordance with CEQA Section 21081(a)(2), the County cannot approve the project without making a finding that project changes that are necessary to mitigate significant effects and that are within the jurisdiction of another public agency have been, or can and should be, adopted by that other agency. A mitigation monitoring program will be prepared for consideration by the Board of Supervisors.

78.94 Comments noted. Please refer to the response to Comment 78.20 above.

79. Marshall M. Snover, 2209 Concord Avenue, Brentwood; February 25, 1997

79.01 Please refer to the response to similar Comment 27.01.

80. Kitty Walker, Senior Planner, San Joaquin County Community Development Department; February 25, 1997

80.01 The current applications on file with the County include a (1) general plan amendment, (2) rezoning to P-1 (Planned Unit District), (3) preliminary development plan, and (4) development agreement. These applications are discussed on pages III--11 through III--16 of the Draft EIR. The Draft EIR specifically analyzed the environmental impacts that would result from these applications. In order to implement these project applications, additional approvals will be required. These approvals and subsequent projects are listed on pages III--44 through III--49 of the Draft EIR. Also please see the graph on pages III--47 that delineates the "current application" and "future applications."

See "Master Response A: Master EIR Approach; Separation of the Current Project from Anticipated Subsequent Projects."

80.02 The requirement for establishment of onsite jobs/housing targets which are accepted as part of the project development agreement provides adequate assurance of measure compliance. See page IV.A--59 language re: incorporating the onsite jobs/housing targets and other employment development program (EDP) provisions into the county (or city)/applicant development agreement. Also, see Master Response C, item 1.

80.03 This comment expresses the concerns regarding regional traffic forecasts and the impacts of Cowell Ranch project traffic on other counties.

The Draft EIR analyzes roadway segments outside of Contra Costa County and addresses impacts on these roadways in the same manner as those within Contra Costa County.

Since San Joaquin County is located outside of the nine-county Bay Area, special attention was given to analyzing traffic to and from this county, as discussed in detail in response to Comment 17.02.

The Draft EIR identified a significant unavoidable impact on Vasco Road. However, through the mitigation process envisioned by *Mitigation T-1*, the project could be required to contribute fair share funding toward Vasco Road improvements based on the amount of project traffic that would use this facility.

Contrary to the suggestion made by the commenter, the Draft EIR did not identify significant unavoidable impacts on SR 4 east of Bixler Road, Byron Highway in Alameda County, or I-580 in Alameda County. Based on this analysis, no such impacts would be expected on SR 4 east of Discovery Bay. Please refer to pages IV.C--32 through IV.C--33 for discussion of the study area definition; the methodology

used for defining the project study area conforms to Contra Costa Transportation Authority (CCTA) technical procedures.

Mitigation T-1 (see Draft EIR, pages IV.C--53 through IV.C--59) recommends that Contra Costa County, as the Lead Agency, be responsible for determining whether, for each roadway system component, the combination of recommended measures (fair-share funding, travel demand management measures, etc.) would achieve compliance with the applicable roadway system **performance standard**. This determination could be made using Alameda County, San Joaquin County, or Caltrans performance standards, as appropriate; please note that the discussion of *Mitigation T-1* (Draft EIR, page IV.C--53) refers to the requirements for the applicant to demonstrate that *"all portions of roadways and all intersections identified in this EIR as significantly affected by the project have been improved to meet applicable levels of service (LOS) performance standards following project occupancy, as outlined in the applicable adopted General Plan..."* (emphasis added). This approach would require coordination with other agencies that have jurisdiction over roads that would be directly affected by project traffic (e.g., Alameda County, San Joaquin County, Caltrans Districts 4 and 10), as suggested by the comment.

The Draft EIR does not imply that, simply because an improvement has been discussed, a project impact would be mitigated. The Draft EIR (pages IV.C--55 and --56) recommends widening of SR 4 east of Bixler Road to four lanes, widening of I-580 east of Vasco Road to provide an HOV lane, and widening of the Byron Highway to four lanes. If the Draft EIR states that an improvement is required to reduce the project's impact to a level of insignificance, then applicants for individual future development proposals on the project site will be required to demonstrate that the improvement has been or will be constructed.

Tables 24 and 25 show the destination of project traffic to various locations in the Bay Area, including Stockton, Lodi, Tracy, Manteca, the proposed Mountain House project, and other locations east of the project site. These trip distribution assumptions, which formed the basis for the Draft EIR traffic analysis, reflect an interrelationship among communities in the "tri-county area," as suggested by the commenter.

81. Carol A. Davis, 3600 Vasco Road, Brentwood; February 26, 1997

- 81.01 This is a statement of opinion regarding the proposed project. The comment does not address the adequacy or the completeness of the Draft EIR. The County may consider these statements when making a decision on the proposed project. Public hearings will be held to consider the proposed project after the Final EIR has been published.

82. Karen and Ed Scally, 2211 Olympic Drive, Martinez; February 26, 1997

- 82.01 The Draft EIR public review is the first phase of the project review. The process ensures that interested organizations and individuals have all the necessary facts about the project so that they can participate in a more meaningful way. The commenter may, and is encouraged, to participate in the decision through the public hearings which will be held on the General Plan Amendment, rezoning, Preliminary Development Plan, and development agreement.
- 82.02 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Agriculture	IV.B.4	Yes
Traffic	IV.C.4	Yes
Biological resources (endangered species habitat)	IV.G.4	Yes
Air quality	IV.K.4	Yes

83. Margarette Nail, 3900 Sellers Avenue, Brentwood; March 4, 1997

- 83.01 The commenter states opposition to the project citing a number of environmental issues. The County may consider this statement of opposition when making a decision on the project. The issues cited, Draft EIR sections where these issues are discussed, and whether a significant impact has been identified, are indicated below:

<u>Issue</u>	<u>Draft EIR Section(s)</u>	<u>Significant Impacts Identified</u>
Land use	IV.A.4	Yes
Traffic	IV.C.4	Yes
Public services (schools, police service)	IV.F.3, IV.F.6	Yes
Biological resources (wildlife habitat)	IV.G.4	Yes
Air quality	IV.K.4	Yes

84. Patricia E. Curtin, Gagen, McCoy, McMahon & Armstrong (representing project applicant); March 14, 1997

- 84.01 The applicant has made, and might continue to make, changes to the proposed project (general plan amendment, rezoning, preliminary development plan, and development agreement) since release of the Draft EIR. This process of project revision represents common practice and reflects the intent of the CEQA process (i.e., to induce project modification as warranted to reduce or avoid identified significant adverse environmental impacts). If the Final EIR is certified and if the project is advanced, the County will continue to review the latest project revisions following the normal post-EIR development review process, to determine whether the changes adequately incorporate the conditions of project approval, including all adopted EIR mitigations. There is no state- or County-adopted CEQA implementation guideline which requires the EIR to be continually updated and recirculated to reflect post-Draft-EIR changes in a project, provided that the changes do not result in a significant additional environmental impact or mitigation need not considered in the Draft EIR.

The applicant's comment identifies the changes made in the project since release of the Draft EIR. Following the normal (post Draft EIR) development review procedure, these changes will be reviewed by the County to determine whether they adequately incorporate various Draft EIR mitigation recommendations. These comments are not related to the adequacy of the Draft EIR.

- 84.02 Comment acknowledged. See section IV Errata for page IV.B--1 which incorporates a change in the apple orchard acreage from 246 to 217. The revision does not affect the EIR conclusions regarding impacts and mitigation measures.

- 84.03 Figures 16 and 17 have been revised to illustrate these SOI changes.

The text on pages IV.A--22 and 23 does not pertain to the SOI.

- 84.04 The discussion of *Impact LU-1* (Draft EIR, page IV.A--32) reviews the open space provisions cited by the commenter. However, these provisions would not mitigate the project-related and cumulative open space loss to a less-than-significant level since, as noted under *Mitigation LU-1*, open space cannot feasibly be created to replace the lost open space.

- 84.05 See response to Comment 78.14.

- 84.06 The Keyser Marston study concludes that there is enough demand for up to 150,000 square feet of convenience retail space "on the property" (i.e., Cowell Ranch). The point made under *Impact LU-5* is that project-proposed commercial retail and office development surplus may detract from existing commercial development in Brentwood. This conclusion is supported by the data on Draft EIR pages IV.A--41 and 42, separate from the Keyser Marston study.

The point made with respect to the Keyser Marston study is that because market demand in Brentwood cannot support a substantial addition in convenience sales, and because the extent of new convenience commercial proposed on the project site (within the Brentwood market area) is not fully supported by the project increase in residential development, the project convenience commercial space can be expected to have a significant adverse economic effect on existing Brentwood convenience commercial activity.

See response to Comment 78.14.

- 84.07 The Draft EIR describes the impacts of the project on status quo conditions (on the existing setting), as mandated by CEQA. *Impact LU-6* states that the project will contribute to an unavoidable impact on the existing rural character of the Brentwood area; this impact statement, which is based on analysis of a specific project, may reasonably differ from the conclusion of the Brentwood General Plan EIR, which evaluated a less precise development scenario for the area (i.e., one based on general plan designations). It should be noted that the County's 65/35 Land Preservation Standard states that a minimum of 65 percent of County lands shall be on-urban, and therefore cannot be used to justify conversion of land to urban uses. Please also see response to comment 78.16.
- 84.08 The Draft EIR (pages IV.A--52 through IV.A--53) indicates that 444 acres on the south side of Camino Diablo are within the Los Vaqueros Watershed Acquisition Area to be acquired by the Contra Costa Water District, and that the remaining 186 acres would continue to be owned by Cowell. The commenter is correct that the County would control future development on these 186 acres, which is located outside the *Urban Limit Line*, and that permitted development is limited to existing land uses allowed by the current zoning. However, as indicated by *Impact LU-9*, urban development on the project site (i.e., on the north side of Camino Diablo) may increase pressure for development on the remaining 186 acres on the south side of Camino Diablo. The only measures available to ensure that the 186-acre area is permanently protected from urban development are those suggested by *Mitigation LU-9*: (1) dedication of the 186-acre area to a public agency, (2) dedication to a conservation organization, or (3) retention in private ownership with deeded development rights granted to the County. Requirements that sewer and water infrastructure be sized to limit future development on the 186-acre area, as suggested by the commenter, may assist (at least temporarily) in reducing development pressure on the area, but would not ensure that the land is permanently protected from development, and therefore would not reduce the growth-inducing impact identified in *Impact LU-9* to a less-than-significant level.
- 84.09 Figure 25 is a direct duplication of an Agricultural Core boundary map prepared by the Contra Costa County Community Development Department. The Agricultural Core is a county-adopted rather than a city-adopted boundary. The boundary depicted on Figure 25 was confirmed as correct by county staff (June 10, 1996 telephone

conversation with Jim Cutler). The boundary does extend slightly south of the Marsh Creek tributary that leads to Kellogg Creek (i.e., the Kellogg Creek "side channel"), as shown on Figure 25, rather than continuously with the channel (Cutler). Thus, the county map (Figure 25) "governs" for EIR purposes.

However, in re-computing the estimated acreage of project overlap, it appears that the applicant's estimate of 24.8 is more accurate than the Draft EIR figure of 36 acres. In response, the EIR has been revised to change the 36 to 25 (see section IV Errata for page IV.B--14).

- 84.10 The Draft EIR does not define "Prime Agricultural land as Class I and II soils." Rather, the Draft EIR states on page IV.B--14 that, as stated in the County general plan, the County's *Agricultural Core* designation "represents the County's prime agricultural land use classification and applies to properties that contain primarily Class I and II soils (i.e., *prime soils*)." To avoid misconstruing the nomenclature, the expression "productive prime agricultural lands" on Draft EIR pages IV.B--18 and 21 has been revised in response to this comment to "prime agricultural soils" (see section IV errata for page IV.B--18 and 21).
- 84.11 The point made on Draft EIR page IV.B--21 is that the aggregate cumulative effect of these various onsite ag. land losses, which involve roughly seven separate areas (see Figure 26), would be significant. In response to this comment, the *Impact AG-2* language has been revised to clarify this point (see section IV, page IV.B-21 errata).
- 84.12 Because the Contra Costa County General Plan includes a provision for amending the Urban Limit Line (ULL), a proposed change in the ULL is not, by itself, inconsistent with the County General Plan. Please see the revisions made to EIR page IV.B--26 (*Impact and Mitigation AG-5*) which have been made to clarify the fact that a change in the ULL requires a rigorous review process; the General Plan identifies a number of findings which must be made in order to approve an Urban Limit Line change. Any application or request to change the Urban Limit Line or the Agricultural Core designation would require an amendment to the General Plan. A 4/5ths vote of the Board of Supervisors is required for approval of an Urban Limit Line change. Any such change would also require public hearings and environmental review as mandated by state law. At the present time, there are no requests before the County other than the proposed project to change the Urban Limit Line or the Agricultural Core designation. If a request does arise, the request would be subject to its own environmental review and public hearings.
- 84.13 Table 22 contains information that was current at the time of Draft EIR publication. The table shows roadway improvements anticipated by the years 2010 and 2026. The commenter suggests that improvements have already been completed at the Walnut Boulevard/Balfour Road intersection and Fairview Avenue between Balfour Road and Central Avenue. This information does not alter the Draft EIR's conclusions regarding traffic impacts at these locations.

- 84.14 The Draft EIR considers the cumulative (Year 2026) impacts of the provision of a crossing at Fairview Avenue and M Street.
- 84.15 The comments regarding the MIS to be completed for the State Route 4 widening project between Railroad Avenue and State Route 160 are noted.
- Mitigation T-1* recommends incorporation of TDM measures into the project. The impact analysis did not consider any reduction due to TDM measures, however; this represents a conservative approach, since the effect of TDM measures is not well documented and varies widely between different projects.
- 84.16 The effects of limiting eastbound traffic from the Cowell Ranch project were considered in the Draft EIR traffic analysis. The roadway network assumed in the travel demand forecasting model contained the overcrossing of State Route 4 Bypass at Fairview Avenue.
- 84.17 Comment acknowledged. This comment notes that the proposed project development plan (Figure 8 of the Draft EIR) shows a secondary, emergency vehicle access extending from Planning Area 32 to Briones Valley Road. *Mitigation T-7* has been revised to reflect this correction (see Section IV, Revisions to the Draft EIR (Errata)). The basic intent of *Impact T-7* and accompanying *Mitigation T-7* is unchanged, however.
- 84.18 For traffic analysis purposes, project transit ridership was assumed to consist mainly of park-and-ride trips. Based on the cited significance criteria (page IV.C--30 of the Draft EIR), failure to provide transit service to the project would conflict with Contra Costa County and City of Brentwood policies that advocate alternative transportation systems, representing a potentially significant impact (*Impact T-11*). As discussed on page IV.C--69 of the Draft EIR, policy conflicts serve as the basis for the impact finding.
- 84.19 Comment noted. Provision of transit service requires an on-going operations cost and now requires public subsidy. Routing, frequency, and funding are an annual concern and would need to be routinely addressed during all phases of project development.
- 84.20 Comment noted. The comment indicates that the CCCFCWCD and the applicant's engineer have conducted sufficient hydrologic modeling and analysis to conclude that this impact would be mitigated by the proposed drainage/flood control improvements that are part of the project. However, since final design of the proposed improvements has yet to be completed, the recommended *Mitigation D-1* is deemed necessary to assure compliance with County standards and the drainage/flood control objectives for downstream reaches of Marsh Creek.
- 84.21 The comment questions the need for any downstream drainage/flood control improvements on Marsh Creek and Kellogg Creek as a result of the project.

The comment is correct in stating that the project drainage plans would not exacerbate downstream flooding problems on Marsh Creek and Kellogg Creek. However, since the project site is located within the Marsh Creek and Kellogg Creek watersheds, the project would contribute to the overall runoff volume, and this would be to a greater extent than under current conditions or under other assumptions for the development of the site considered in previous drainage studies. Although the applicant will not be required to make downstream improvements, the applicant's contribution to the already planned improvements will increase based on the greater amount of development associated with the project (in terms of impervious surface area). For clarification, *Mitigations D-2* and *D-3* have been revised by striking the phrase **"make downstream improvements and"**. (See section IV, Revisions to the Draft EIR (Errata).)

- 84.22 Comment noted. The comment points out that Cowell Ranch has existing agreements for raw water supply from two sources: ECCID and BBID. *Mitigation PF-2* in the Draft EIR states that a raw water supply "does not exist," which is intended to mean that there is no developed raw water supply system serving the property. However, as noted by the comment and as reflected in *Mitigation PF-2*, raw water is available from either ECCID or BBID. The mitigation properly calls for one of these sources to be developed to meet the raw water needs of the project.
- 84.23 The change described by this comment is reflected in Table A in the response to Comment 85.84.
- 84.24 Comment noted.
- 84.25 CEQA provides that mitigation measures must be required where impacts are considered significant. Impacts on San Joaquin kit fox are considered significant. Therefore, it is appropriate that the Draft EIR include an amount of compensatory mitigation habitat to be provided for impacts to kit fox. The Draft EIR also recognizes that the compensatory habitat required does not necessarily reflect the eventual requirements of the U.S. Fish and Wildlife Service. These requirements will be embodied in an agreement between the applicant and the USFWS that will be finalized during Section 7 or 10a consultations. The Draft EIR also recognizes that there have been no documented sitings or evidence of kit fox on the Cowell Ranch.
- 84.26 Comment noted.
- 84.27 Figure 8-4 on page 8-55 of the Contra Costa County General Plan identifies mineral resource areas designated by the California Department of Conservation Division of Mines and geology. Page 8-54 of the general plan states that "The resource [domegine sandstone] extends beyond the boundaries designated by the state. This plan calls for the protection of the entire sandstone area."
- 84.28 Comment noted. Please refer to the response to Comment 85.96.

84.29 The visual analysis section relies in part on a system of computer-generated "view cone depictions" as well as on computer-generated "corridor viewshed depictions." (Please see explanation of this approach on Draft EIR pages IV.J--20 through 21.) The visual analysis also includes consideration of numerous other factors, including full and accurate consideration of pertinent criteria in County and City of Brentwood general plans (see pages IV.J--13 through 17). Contrary to the comment, the city's general plan does designate "topography of visual significance," including ridgelines, as adequately explained on Draft EIR pages IV.J--16 through 17. As explained on Draft EIR pages IV.J--16 through 17, the City's general plan states that the City "expects to preserve views of surrounding foothills..." and includes policies to "preserve views of the surrounding countryside...and significant natural features such as--nearby hills and ridgelines." As a result of these and other considerations, the Figure 39 depiction of topographic features, including "significant ridgelines" is an appropriate basis for use, together with the other informational considerations described in the Draft EIR, in determining project visual impacts and mitigation needs.

Please also refer to the response to related Comment 84.30 below.

84.30 The comment is incorrect. As illustrated on Draft EIR Figure 59, the Brentwood General Plan does designate portions of the site as "topography of visual significance" (see Brentwood General Plan, Figure 7: Community Design, p. II.3-2) The Draft EIR text correctly describes the relationship of project topographic features to both County and City general plan policy. The Draft EIR states on page IV.J--3 under (2):

"The County General Plan does not designated any major scenic ridgelines on the project site. However, the site does include a number of visually significant hills and ridgelines that are visible from other portions of the project site and from surrounding areas, including locations in Brentwood. The Brentwood General Plan designates the area as containing topography of visual significance (see Figure 59). To provide a basis for evaluation of project visual impacts, Figure 59 identifies significant onsite hilltops and ridgelines, although these areas of the site are not classified as major scenic ridgelines in the County General Plan."

84.31 The comment is incorrect. Of the 11 representative **study viewpoints** identified in Draft EIR section IV.J, five are described as stationary viewpoints or "view cones": view 2, view 3, view 6, view 10, and view 11 (see Figures 61, 62, 65, 69, and 70, respectively). The Draft EIR adequately explains the ranking and weighting of the various representative **study viewpoints**, including "view cones", on pages IV.J--21, IV.J--33, and IV.J--34. The five "view cones" (viewpoints 2, 3, 6, 10 and 11) are ranked along with the other viewpoints in Tables 60 and 61.

The Draft EIR intentionally does not rank the view impact significance criteria listed on Draft EIR IV.J--17 and IV.J--18. No such ranking is suggested by the CEQA Guidelines.

The Table 60 and 61 ranking of viewpoints and planning areas by their relative visual vulnerability was done as one means of identifying significant visual impacts. However, there was no intent to rank any of the various resulting identified "significant" visual impacts (i.e., *Impacts V-1, V-2, V-3, etc.*) as more or less significant than any other. Such a ranking of significant impacts has not been attempted in any section of this EIR nor is such a ranking required under CEQA Guidelines.

To clear up some of the apparent confusion in this regard, revisions to Draft EIR pages IV.J--34 and 34 (Tables 60 and 61) have been included in the errata section herein (section IV, Revisions to the Draft EIR (Errata)) to change the expression "Visual Impact Ranking" to "Visual Vulnerability Ranking."

- 84.32 The purpose of the viewshed maps is clearly defined on pages IV.J--20 through 21 of the Draft EIR. The impact conclusions and mitigation recommendations in the Draft EIR are based on a full and adequate understanding and consideration of areas proposed for development and those proposed to be retained as open space (Figures 6 and 8). The Draft EIR does not state or intentionally suggest that land uses and impacts beyond the project boundaries would be attributable to the Cowell Ranch project. The viewshed figures clearly show the project boundaries, and intentionally depict visible areas outside as well as inside the project boundaries to provide proper visual impact context.
- 84.33 The comment pertains to photographs 1 and 2, views from Balfour Road in Brentwood. Although the comment is correct that some of the 1994 photographs of views from Balfour Road do not show roadside subdivision development that has occurred since the photos were taken, the Existing Setting text on page IV.J--4, paragraph c(1), refers to the grading for this development, which is evident in the photograph. Most importantly, the identification of project visual impacts on views from Balfour Road does take into consideration anticipated view blockage from future (planned) roadside development, as explained on Draft EIR page IV.J--35, paragraph (a) ... "As shown, views of the site along some portions of this corridor would be blocked by urban development in the foreground (e.g., on the Spanos property)."
- 84.34 Regarding the ultimate visibility of various planning areas, please see the responses to similar comments regarding future foreground obstructions, etc., that follow, including 84.38, 84.39, 84.40, 84.42, 84.43, 84.44, and 84.45. Regarding the visibility of planning area 11 and related significant ridgelines, please see responses to Comments 84.30, 84.38, 84.41, 84.42, and 84.43.
- 84.35 The basic premise in this comment that "the project area does not contain prominent ridgelines as defined by County and City policy" is incorrect, as explained in the response to Comment 84.30. In any event, the Draft EIR correctly states that the proposed development plan as described in the applicant's April 1, 1996 application could result in "development on hillsides," even though the project development standards may "restrict hillside grading." Figure 59 (Visual Factors) on page IV.J--4 of

the Draft EIR also appropriately designates certain topographic features as "significant ridgelines and hilltops" for reasons explained on Draft EIR page IV.J--3 (see response to Comment 84.30).

- 84.36 The comment confuses the EIR conclusions. The fact that such design standards are not part of this application (i.e., are not part of "the project") represents a deficiency leading to the potential impact. The Draft EIR determination that visual *Impacts V-1* (project impacts on East County and local landscape), *V-4* (project impacts on views from Camino Diablo/Marsh Creek Road), *V-5* (project impacts on views from the Walnut Boulevard/Vasco Road corridor), *V-6* (project impacts on Marsh Creek Road view), *V-8* (project impacts on views from Round Valley Regional Park) would remain significant and unavoidable is based on the conclusion that even with effective implementation of the stringent design standards, development of a mixed use project of the magnitude and scale proposed with this application would result in a significant, unavoidable, adverse alteration of the existing rural character of the project site as viewed from these viewpoints (see significance criterion 2 on pages IV.J--18, especially paragraph 2 on page IV.J--19).
- 84.37 Please refer to the response to similar Comment 84.29.
- 84.38 The photos and associated Draft EIR text do indicate that views from segments of Balfour Road would be blocked by intervening development and vegetation. Existing and planned intervening development was taken into account by the computer in depicting areas of the site visible from Balfour Road (see Draft EIR Figure 60, which shows that nearly half of the roadway length depicted on the figure would be subject to foreground view blockage, and the page IV.J--35 text which explains that portions of this foreground will eventually be blocked by pending development). (Please also see responses to similar Comments 78.75 and 84.33, above.) The simulations do not take into account foreground vegetation, however. As a result of these assumptions, the Draft EIR analysis shows that Balfour Road between Fairview Avenue and Walnut Boulevard would have foreground gaps where views would open towards the project site.

With respect to the other aspects of this comment, the Draft EIR analysis also indicates that Planning Area 11 does include an existing "significant ridgeline" (see response to similar Comments 84.30 and 84.43 regarding the Draft EIR identification of significant ridgelines). With respect to which portions of which planning areas would be visible from which viewpoints, the intent of the Draft EIR approach is to identify all of the proposed project development areas that the computer analysis indicates may be visible from the various key offsite viewpoints so that these potentially visible areas can be the focus of future development review when individual projects (subdivision) applications come forward. Through that project-specific review process, it may be determined that some of these areas will not in fact be visible due to a particular foreground condition, the grading characteristics of the project, or other factors.

The *Mitigation V-2* requirements regarding hillside development standards are intended to be imposed, as stated, "on a case-by-case basis" [underline added] when reviewing future development applications involving various identified planning areas, including 6-11, 16, 35-38, 45, 46, and 58. If, through this review process, it is demonstrated that these areas for whatever future reason are not visible from Balfour Road or any of the other identified viewpoints of concern, then obviously the development standards would not be imposed.

Given the potential number of planning areas that the Draft EIR computer analysis indicates would be visible from this viewpoint, and related City of Brentwood concerns, the identification of this visual impact potential as significant, and the associated mitigation measure (special consideration during development review) should be retained in the EIR.

- 84.39 The comment pertains to the Draft EIR *Impact V-3* findings with respect to project impacts on views from Deer Valley Road. By overlaying the computer-generated map of areas of the project site potentially visible from Deer Valley Road (Draft EIR Figure 63) with the proposed project development plan (Draft EIR Figure 6), it was determined that portions of Planning Areas 31 and 32, 1, 6, 23, 58, and 60, the North Village, the East Village, and West Creekside, may be visible from Deer Valley Road. On this basis, these areas are identified in the Draft EIR (under *Mitigation V-3*) for imposition of special hillside development standards on a "case-by-case" basis during the future individual development (subdivision) review procedures that will be required for these planning areas. If, as the comment suggests, development in any of these areas would not affect views from Deer Valley Road, this would be confirmed during the future "case-by-case" evaluations.

The comment also describes changes to Planning Areas 31 and 32 that have been made since release of the Draft EIR that may reduce visual impacts. If the project proceeds, such changes will be reviewed by the Lead Agency for compliance with conditions of project approval, including those conditions of approval that incorporate *Mitigation V-3* for project visual impacts on views from Deer Valley Road.

In response to this comment, the word "would" has been changed to "may." See errata in section IV, Revisions to the Draft EIR (Errata) for *Impact V-3*. No other change in the Draft EIR is warranted.

- 84.40 Please refer to the response to similar Comment 84.38.
- 84.41 The intent of the computer-generated Figure 66 (Areas of the Project Site and Background Visible Along Walnut Boulevard-Vasco Road Corridor) is to show areas of the project site that may be visible in the background above the foreground orchard. The comment is correct that some areas west of the planned SR 4 Bypass may not be visible due to the elevated nature of the SR 4 Bypass. In response to this

comment, an explanation of these factors has been added to the text of page IV.J--41 for *Impact V-5*--see section IV, Revisions to the Draft EIR (Errata).

Again, however, the intent of the computer depiction of potentially visible areas on Figure 66, like the other similar figures, is to conservatively illustrate areas for "case-by-case" consideration in the imposition of future hillside development standards. If, as the comment suggests, portions of the areas depicted by Figure 66 as potentially visible are to be blocked from view by the SR 4 Bypass as ultimately engineered, or by other "permanent obstructions," this would be confirmed during the case-by-case evaluation.

- 84.42 The comment pertains to Draft EIR *Impact V-6*, potentially significant project impacts on views from the north-south Marsh Creek Road segment traversing the project site (a designated scenic route). By overlaying the computer-generated map of areas of the project site visible from Marsh Creek Road (Draft EIR Figure 67) with the proposed project development plan (Draft EIR Figure 8), it was determined that portions of the various development areas cited in this comment could potentially be visible from Marsh Creek Road. On that basis, these areas are identified in the Draft EIR (*Mitigation V-6*) for imposition of special hillside development standards on a "case-by-case" basis during future individual development (subdivision) processing for these areas. The computer-generated maps are intentionally conservative, and intentionally err towards showing more rather than less visible area (e.g., existing intervening vegetation, which would be removed in the future, is not accounted for). If, as the comment suggests, the development plans for any of these areas would not affect views from Marsh Creek Road, this would be confirmed during the future "case-by-case" evaluations of individual project applications.

The comment also describes changes to Planning Area 32 apparently made since release of the Draft EIR that may reduce visual impacts. If the project proceeds, such changes would be reviewed by the Lead Agency for compliance with conditions of project approval, including those conditions of approval that incorporate *Mitigation V-6*.

In response to this comment the words "would" have been changed to "may" or "could." See errata in section IV, Revisions to the Draft EIR (Errata).
No other change in the Draft EIR is warranted.

- 84.43 The analysis of project visibility from the SR 4 Bypass does consider the anticipated vertical elevation of the grade-separated (overpass) segments of the route, as explained in the responses to similar Comments 78.78 and 78.79. Explanatory language to this effect has been included in the errata for pages IV.J--30 (Figure 68) and IV.J--46 (see section IV, Revisions to the Draft EIR (Errata)). The Figure 68 depiction of areas of the site visible from the SR 4 Bypass conservatively assumes no noise walls or other view obstructions along the bypass. This aspect was already explained in the Draft EIR on page IV.J--46.

A Draft EIR-identified "significant ridgeline" does traverse planning area 11 (Figure 8, the Proposed Development Plan, was overlaid on Figure 59 to make this determination). Please see the response to Comment 84.30 above for more explanation of what constitutes a significant ridgeline in this analysis. The computer-assisted analysis conducted for the Draft EIR also indicates that portions of Planning Areas 31 and 32 may also be visible from the elevated portions of the SR 4 Bypass (the Modified County Alignment) above intervening topography. In any event, because these depictions are approximations and it was anticipated that such EIR findings would be disputed due to the preliminary nature of the currently proposed development plan, and because these ridgeline visibility findings may be affected by future mass grading activity, the language for *Mitigation V-7* provides for imposition of the various recommended hillside development standards "on a case-by-case basis" [underline added] when reviewing future development applications involving various planning areas, including 11, 31, and 32. If the applicant is correct that these areas will not be visible from the elevated SR 4 Bypass, this fact would become evident in this case-by-case review process and the various recommended standards would not have to be imposed. Please also see the response to related Comments 78.75 and 84.38, second paragraph.

- 84.44 Comment acknowledged. The *Impact V-8* description (potentially significant project impacts on views from Round Valley Regional Park) has been revised in concurrence with this comment that "the vast majority of the project site and background visible from Round Valley Regional Park as depicted on Figure 69 is comprised of natural, unbuilt features."

With respect to depicted "view cone" areas that are outside the boundaries of Cowell Ranch, the project site boundary is clearly depicted on Figure 69.

Given the elevation of the Round Valley Regional Park vantage point above the project site, and the scale of the project at buildout, the use of landscaping, building siting, and height limits may substantially reduce the degree of visual impact, but would not be expected to reduce the impacts of the project on the local rural character as seen from this elevated overview to a "less-than-significant" level.

- 84.45 The description of *Impact V-9* is not misleading. Existing vegetation does not block all views towards the project site from Morgan Territory Regional Preserve. One of the principal attraction factors of the Morgan Preserve is its panoramic views towards the Delta.

Please also see the response to Comment 84.44 above, and related errata in Section IV, Revisions to the Draft EIR (Errata).

- 84.46 The Baird decision found that a pre-existing environmental problem may have an adverse effect on a project and its residents, but that any such effect is beyond the scope of CEQA and its requirement of an EIR: the purpose of CEQA is to protect the

environment from proposed projects, not to protect proposed projects from the existing environment.

The Baird case notwithstanding, under the CEQA-identified adopted plan policy consistency concerns (CEQA Guidelines section 15125(a)), the EIR should acknowledge and adequately respond to the existence of any adjacent environmental factors, including high voltage electrical transmission lines. Adopted policies pertaining to the relationship of new land uses to existing potentially incompatible or hazardous uses include:

Brentwood General Plan:

Minimize conflicts between commercial and industrial uses and adjacent residential and agricultural uses. (Economic Development Element, Policy 3.2, page II.5-7) -- see Draft EIR page IV.A--29.

On this basis, the EIR recommends that the project incorporate adequate internal setbacks and other measures to adequately protect the existing line, and to adequately protect project residents and occupants from the adverse effects of the existing line. No modifications to the existing line itself are suggested in *Mitigation V-11*.

84.47 Please refer to the response to similar Comment 84.46 above.

84.48 Comment noted. This comment refers to the Baird v. Contra Costa County decision (1995) (32 Cal.App.4th 1464), in which the court concluded that to impose upon the project a requirement that it address or mitigate pre-existing conditions would impose a requirement beyond those stated in CEQA or its guidelines, and is thus prohibited.

In this case, the Cowell Ranch project has the potential to expose project occupants to "severe noise levels" (see Criterion #2 under "3. Significance Criteria" in section IV.L, Noise, of the Draft EIR) associated with the following existing offsite land uses: (1) the PG&E Terminal and Gas Compressor Station, (2) the East Contra Costa County Airport, (3) the Kellogg Creek Sand Quarry, and (4) the Sand Hill Ranch Motorcross Park. These potentially severe noise levels could violate General Plan-defined land use/noise compatibility standards (see Criterion #1 under "3. Significance Criteria," in section IV.L, Noise) and must be considered in the project planning process. Therefore, in the interests of full disclosure and completeness, the Draft EIR has evaluated potential noise problems associated with these "pre-existing conditions" (see *Impacts N-4 through N-8, N-11, and N-12*).

Impact N-3 evaluates the impact of traffic noise from the SR 4 Bypass on the project-proposed community college. This evaluation does not involve "pre-existing conditions," as suggested by the commenter, since neither the SR 4 Bypass nor the community college have been built.

- 84.49 The planning and approval process for the SR 4 Bypass project is at a later stage than the process for the Cowell Ranch project. Based on the EIR acoustical consultant's contact with Caltrans staff, it appears unlikely that the SR 4 Bypass project could incorporate noise mitigation for the Cowell Ranch project, and that incorporation of this mitigation may not be Caltrans' legal responsibility. It should also be noted that, because the northern portion of the Cowell Ranch site is located upslope of the proposed Bypass alignment, noise control measures are likely to be more appropriate and effective if they are located on the Cowell Ranch site. For these reasons, *Mitigation N-1* recommends building design, site plan revision, noise barriers, open space buffers, and other features on the Cowell Ranch site to reduce project exposure to Bypass traffic noise.
- 84.50 Approximately 22,500 to 37,500 annual air operations are conducted within the East Contra Costa County Airport's immediate service area.¹ The airport is expected to generate 210,000 annual aircraft operations by the year 2025.² The noise modeling input data and assumptions used to generate the aircraft noise exposure contours illustrated in the Draft EIR (Figures 74, 75, and 79) included flight track geometry and operational procedures specified in the 1986 East Contra Costa County Airport Master Plan. These procedures were designed with the aim of achieving significant noise abatement and safety benefits.³ These assumptions therefore provide a reasonable basis for the Draft EIR's conclusions regarding project exposure to aircraft noise (*Impact N-8*). The information requested by this comment has been taken into account in generating the noise contours shown in Figures 74, 75, and 79. The suggested mitigation regarding changes in flight paths to avoid aircraft overflights over the project site may not be practical, given that airport operational procedures are in accordance with the 1986 Master Plan. *Mitigation N-8* recommends disclosure of potential intermittent noise impacts from aircraft overflights to prospective project site buyers and renters; this measure alone would not be adequate to mitigate the impact, however.
- 84.51 A review of the study area during the initial noise monitoring survey indicated that the potentially affected homes along existing roadways front onto the roadways and have driveway access. This makes it difficult to effectively shield the homes with sound walls. This mitigation measure could be reviewed on a case-by-case basis, as it may be possible in certain cases to provide noise barriers that would partially shield and partially mitigate the expected noise level increases. It is unlikely that this impact could be mitigated to a less-than-significant level at all affected residences, however.

¹"Aircraft Noise Analysis, Cowell Ranch Project EIR," prepared for Contra Costa County and Wagstaff and Associates by P&D Aviation, December 22, 1993; page 1.

²Ibid., Table 2, page 4.

³Ibid., pages 8 and 12.

84.52 Due to the amount of automobile-related energy consumption associated with the project, the impact E-2 cannot be considered less-than-significant, and mitigation E-2 is necessary to reduce this impact to a less-than-significant level.

84.53 As indicated on page V-26 of the Draft EIR, the comparative analysis of wetland impacts of the alternative site FUA #1 in Antioch with the proposed project site is based on the Final Environmental Impact Report on the Antioch Infrastructure Plan (Mundie & Associates 1992). For the reasons described on pages V-29 and -30 of the Cowell Ranch Project Draft EIR, it was determined that the wetland impacts of development on the FUA #1 site would be less than those that would occur on the Cowell site.

The City of Livermore's North Livermore General Plan Amendment area includes approximately 14,500 acres. As explained on page V-33 of the Cowell Ranch Project Draft EIR, while many of the same wetland characteristics exist in the North Livermore area, it is reasonable to assume that a 3,000-acre portion of the 14,500-acre North Livermore area could be selected that would have fewer wetland constraints than the Cowell Ranch property.

84.54 The comments by the applicant regarding applicant perceptions of project benefits may be considered by county decision-makers in their deliberations on the project.

84.55 Please refer to the responses to Comments 84.29 and 84.32.

84.56 The viewshed depictions are intentionally conservative approximations, as described on Draft EIR pages IV.J-20 through 21. Although the general intent has been to depict all viewsheds at all vantage points five feet above the viewpoint surface, possible variations in depicted vantage point elevations--i.e., 10 feet versus six feet versus five feet versus four feet--do not affect the basic impact findings and most importantly, the mitigation recommendations of the Draft EIR. The higher the viewpoint elevation, the greater (more conservative) the "viewshed" depicted. The Draft EIR intentionally errs toward the conservative. The viewshed depiction purpose is to provide a means of focusing future, case-by-case development review, i.e., identifying those areas that may warrant focused future application of hillside development standards, and those that do not. The actual case-by-case evaluation requirement would inherently eliminate development components that prove to be concealed from view.

84.57 Please refer to the responses to similar Comments 78.75, 84.29, 84.32, and 84.41.

84.58 The computer methodology and intent are fully and adequately described on pages IV.J--20 through 21 of the Draft EIR. Please also refer to the response to similar Comments 78.75, 84.32, and 84.41.

- 84.59 The assessment approach, and especially the mitigation measures, remain valid in light of these comments, for the reasons set forth herein in the responses to Comments 78.75, 84.38 through 84.45, 84.55, and 84.56.
- 84.60 The computer-generated viewshed depictions fully satisfy the objectives stated on Draft EIR pages IV.J--20 and 21, and are highly appropriate in assisting future decision-makers in focusing design review, for the reasons described in the responses to similar Comments 78.75 and 84.41.
- 84.61 Please refer to the responses to similar Comments 84.56 and 84.60.
- 84.62 The responses above to applicant Comments 84.29 through 84.47 and 84.55 through 84.61 describe why this comment is rejected and why the Draft EIR visual impact findings and mitigation recommendations, which have been carefully revisited in response to these comments, remain valid and adequate.
- 84.63 Please refer to the responses to similar Comments 84.38 (Balfour Road view), 84.42 (Marsh Creek Road views); 78.78, 78.79, and 84.43 (SR 4 Bypass views); 84.44 (Round Valley Regional Park view); and 84.45 (Morgan Territory view).
- 84.64 Please refer to the response to Comment 84.56.
- 84.65 Please refer to the response to Comment 84.56.
- 84.66 Please refer to the response to Comment 84.42.
- 84.67 Please refer to the response to Comment 84.43.
- 84.68 Please refer to the responses to Comments 84.44 and 84.45.

85. Ann Broadwell, Lizanne Reynolds, Joanne Spalding, Adams & Broadwell (representing Plumbers and Steamfitters U.A. Local 159; International Brotherhood of Electrical Workers, Local 302; and International Association of Bridge, Structural & Ornamental Ironworkers, Local 378); March 19, 1997

85.01 This comment recommends that the Draft EIR be revised and recirculated because it fails to analyze certain potentially significant impacts and develop adequate mitigation measures, and instead "defers" analysis of impacts and design of mitigation until after the EIR is certified and the project approved. These issues are addressed specifically in the responses that follow (see the responses to Comments 85.53, 85.61, 85.62, 85.63, 85.64, 85.65, 85.66, 85.71, 85.72, 85.77, 85.96, 85.99, 85.102, 85.104, 85.118, 85.155, 85.184, 85.193, 85.211, and 85.212).

CEQA Guidelines section 15088.5 states that a lead agency is required to recirculate an EIR when "*significant new information*" is added to the EIR prior to EIR certification. "Significant new information may include a disclosure showing that:

- (1) *A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.*
- (2) *A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.*
- (3) *A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.*
- (4) *The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.*

Section 15088.5(b) further states that "*recirculation is not required where the new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in an adequate EIR.*"

None of the revisions to the Draft EIR that are included in this Final EIR meet the above criteria for recirculation of the Draft EIR. No new significant impacts, nor any new "considerably different" mitigation measures or project alternatives that would clearly lessen the project's environmental impacts, have been identified. Similarly, no substantial increases in the severity of any environmental impacts described in the Draft EIR have been identified.

85.02 Master Response A describes the Master EIR authority and approach applied in separating the current project--i.e., the current general plan amendment, rezoning, preliminary development plan, and development agreement applications--from

anticipated future (subsequent) projects in preparing the Cowell Ranch EIR. This comment implies that this Master EIR is deficient because it fails to provide adequate review of the development agreement and preliminary development plan aspects of the project application, components which the commenter describes as more specific than a general plan amendment and rezoning.

Preliminary Development Plan. The Preliminary Development Plan (PDP) approval sought by the project applicant does not contain all the specific requirements of a Preliminary Development Plan that could be required as set forth in the Section 84-66.1006 of the Ordinance Code. The applicant obtained a waiver from the County allowing it to supply some of the Preliminary Development Plan elements contained in the Ordinance Code at the time a final development plan is submitted. As a result, the analysis in this Master EIR as it relates to the Preliminary Development Plan is more general than would exist if the Preliminary Development Plan application contained all elements in the Ordinance Code. As noted in the Draft EIR (page III--46), any subsequent approvals required for development on the site will be reviewed to determine whether this Master EIR adequately addresses the potential environmental impacts of the approval, or whether additional environmental review is required.

Development Agreement. An application for a development agreement is on file with the County. The development agreement would only implement and secure the general plan amendment, rezoning and Preliminary Development Plan (if approved) that have been analyzed in the Master EIR. The development agreement would not create any additional environmental impacts that have not been addressed in the Master EIR.

Scheduling or Implementing Device. A scheduling or implementing device for the submission and approval of subsequent projects is contained at pages III--46 through III--49 of the Draft EIR. The project phasing is discussed at pages III--33 through III--40. Subsequent project approvals would occur throughout the phasing of the expected 30-year buildout of the project. A more specific schedule cannot be determined at this time since the project applicant (the Cowell Foundation) would not develop the project. The Cowell Foundation is a private non-profit trust and, because of its tax-exempt status, cannot develop the land without losing its tax-exempt status. Cowell plans to sell the land to a developer once the current development applications are approved. To the extent a schedule for major overall future entitlements can be prepared, the following can be anticipated:

- Application for permits from the Army Corps of Engineers to be submitted in July, 1997.
- County certification of the Master EIR and decision on a general plan amendment, rezoning, PDP and development agreement in early 1998.

- Possible request for annexation into the City of Brentwood and pre-zoning agreement to be requested after County approval as outlined above.
- Request for changes in existing spheres of influence and service boundaries; process the first of several final development plans and/or subdivisions in Spring of 1998 (subsequent final development plans and/or subdivisions will be processed as outlined in the project phasing time frames at pages III-33 through III- 40 of the Draft EIR). Approval of these requests is expected to occur at the end of 1998.
- Creation of new and/or financing of service districts in the beginning of 1999.
- Completion of first final subdivision map in the Summer of 1999.
- Project construction of Phase I to begin in the Summer of 1999.

85.03 This comment offers a general opinion regarding the mitigation measures recommended in the Draft EIR and the evaluation of their feasibility. Please refer to Master Response A regarding use of the Master EIR, Master Response B regarding use of future study as mitigation in a Master EIR, and to the responses which follow to the remaining, more specific comments by this commenter; these responses explain why the mitigation approach and measures included in the Master EIR comply with CEQA.

85.04 As stated in the Draft EIR (page III--10), the current project applications *"anticipate, but are not contingent upon, eventual annexation of all or a part of the project urban areas to the City of Brentwood."* However, as suggested by this comment, eventual annexation to Brentwood is anticipated. Accordingly, the Draft EIR evaluates and distinguishes between impacts that would occur (1) if the project were developed in unincorporated Contra Costa County, and (2) if the project were developed within the City of Brentwood. Mitigation measures that involve development standards also refer to both County and City standards, where appropriate. (Please refer to the response to Comment 78.05 above.)

In section III, Project Description, of the EIR, possible annexation of the project to the City of Brentwood is identified as an anticipated "subsequent project" that is separate from the current project application. As stated in section III, *"any subsequent projects will be subject a separate CEQA-required initial study process conducted by the reviewing agency. This process will determine whether this Master EIR adequately addresses the potential environmental impacts of the subsequent project, or whether additional environmental review must be conducted"* (see Draft EIR, page III--46). This process would ensure that mitigation measures would be enforceable if the project is annexed to the City of Brentwood.

85.05 Please refer to the response to Comment 30.16. Before the development agreement is approved by the County, it must be demonstrated that the development agreement is consistent with the General Plan. With respect to housing supply, as noted in the

Draft EIR on page IV.A--35, the project is expected to have a beneficial impact on the area's housing supply by broadening the type and affordability of housing available in the East County area. The range of housing proposed by the project includes single-family homes, townhouses, duplexes, fourplexes and multifamily units. According to the County General Plan (page 6-25), the purchase price of a home for moderate-income household ranges from \$88,000 to \$132,000, and the purchase price of a home for a low-income household ranges from \$55,000 to \$88,000. *Mitigation LU-3* would require the applicant to prepare a *Project Housing Strategy* and a *Housing Mix and Affordability Monitoring Program* to demonstrate that the housing type and affordability goals of the General Plan are being met.

- 85.06 All anticipated subsequent future projects that are not adequately covered in this Master EIR will be the subject of environmental review as discussed in the responses to Comments 80.01 and 85.02 above and as required by Public Resources Code section 21157.1. At this time, it cannot be determined what level of environmental review (i.e., mitigated negative declaration, focused EIR) will be required for the subsequent projects. This determination will be made at the time the subsequent projects are filed with the County and/or Brentwood as contemplated by the master EIR legislation.

The approvals that would be required if the site is annexed to the City of Brentwood are rezoning, final development plan, annexation and a development agreement. Additional approvals that could be required over the life of the project are subdivision maps, parcel maps, conditional use permits, financing districts and lot line adjustments.

Please note that the statement regarding the need for indirect source permits from the Bay Area Air Quality Management District (BAAQMD) was incorrect and has been removed from the EIR.

The Draft EIR carefully and adequately states what additional approvals will require further review. The Draft EIR has been specifically designed to contain information to support decision-making for all of the requested entitlements. The Master EIR does not need to, nor can it reasonably be expected to, provide "enough detail to support--the listed future approvals." Please also see responses to comments 80.01 and 85.02 and Master Responses A and B.

- 85.07 For each environmental topic area, the Draft EIR identifies relevant County General Plan provisions, and uses these provisions as significance criteria for determinations regarding the significance of project impacts. Relevant inconsistencies with these General Plan provisions are cited and discussed where applicable (e.g., in the discussion of *Impact LU-1*, pages IV.A--32 through IV.A--33 of the Draft EIR, which identifies potential inconsistencies with policies regarding open space and infill development). This approach is consistent with CEQA Guidelines section 15125(b),

which states that *"the EIR shall discuss any inconsistencies between the proposed project and applicable general plans and regional plans."*

The role of the EIR is to describe the project as proposed, and to evaluate its environmental impacts, including potential inconsistencies with relevant General Plan provisions. The Draft EIR fulfills this role. The EIR's function is not to determine the appropriate "balance" among General Plan policies, or to identify amendments needed to maintain internal consistency within the General Plan. This will be accomplished through the planning review and analysis of the project conducted by Contra Costa County Community Development Department. This review will also consider project consistency with County Code requirements such as those cited by this comment.

It is important to note that the General Plan addresses the question of achieving "a proper balancing" among policies. The General Plan states that *"while cautioning the reader of this General Plan document against myopically focusing on a particular policy without reference to its harmonized context, it is important that certain of these guiding policies be expressed with stronger levels of commitment than others...there are occasions where a proper balancing of the hundreds of policies contained in this document, when viewed as an integrated whole, would not warrant strict adherence to a particular policy..."*¹ Thus, interpretation of the provisions cited by this comment will be the subject of the public hearing on the proposed project. The Planning Commission, and ultimately the Board of Supervisors, will assess the General Plan implications as part of their decision on the project.

With these considerations in mind, the following discussion addresses specific General Plan provisions cited in the Draft EIR and referenced by this comment:

- *As feasible, areas experiencing rapid urban growth shall be developed so as to provide a balance of new residential and employment opportunities.* (Land Use Element, Policy 3-3, page 3-40)

Mitigation LU-11 (Draft EIR, page IV.A--59) recommends applicant submittal of an *Employment Development Program* that would assist the project in achieving a closer balance between housing and jobs, thereby addressing project consistency with this policy.

- *New development within unincorporated areas of the County may be approved, providing growth management standards and criteria are met or can be assured of being met prior to the issuance of building permits in accordance with the growth management.* (Land Use Element, Policy 3-5, page 3-40)

¹County of Contra Costa, Contra Costa County General Plan, 1995-2010, July 1996, page 1-8.

The recommended mitigations in sections IV.C (Transportation) and IV.F (Public Facilities and Services) would assist the project in achieving consistency with this policy.

- *Infilling of already developed areas shall be encouraged. Proposals that would prematurely extend development into areas lacking requisite services, facilities, and infrastructure shall be opposed. In accommodating new development, preference shall generally be given to vacant or under-used sites within urbanized areas, which have necessary utilities installed with available remaining capacity, before undeveloped suburban lands are utilized.* (Land Use Element, Policy 3-8, pages 3-40 to 3-41)

This policy is cited in the Draft EIR's discussion of *Impact LU-1: Loss of Open Space* (see Draft EIR, page IV.A--33), which is identified as a significant unavoidable impact of the project as proposed.

- *In order to reduce adverse impacts on agricultural and environmental values, and to reduce urban costs to taxpayers, the County shall not designate land located outside the ULL for an urban land use.* (Conservation Element, Policy 8-30, page 8-40)

As indicated in section III (Project Description) of the Draft EIR (page III--12), the project proposes a redrawing of the *Urban Limit Line* to include 262 acres of the project site within the ULL and to exclude to other areas (totalling 262 acres) elsewhere on the site, so that the project would result in no net change in the total land area within the ULL. As stated in the Draft EIR (page III--12), *"this change would require compliance with required findings and other provisions set forth in Measure C-1990."* A proposal to amend the *Urban Limit Line* with no net change in total land area would not, in itself, create an inconsistency with this policy.

- *Urban development in the future shall take place within the Urban Limit Line and areas designated by this plan for urban growth.* (Conservation Element, Policy 8-31, page 8-41)

As indicated above, the project proposes redrawing of the *Urban Limit Line*, with all urban development proposed to be contained within the proposed (redrawn) *Urban Limit Line*. The project would therefore be consistent with this policy.

- *...Development on open hillsides and significant ridgelines throughout the County shall be restricted, and hillsides with a grade of 26 percent or greater shall be protected through implementing zoning measures and other appropriate actions.* (Conservation Element, Policy 8-14, page 8-29)

The Draft EIR (page IV.D--45) indicates that 23 acres with slopes equal to or greater than 26 percent are proposed to be graded and developed. This alone does not create any inconsistency with the policy.

- *Proposed extension of urban or suburban land uses into areas characterized by slopes over 15 percent and/or generally unstable land shall be evaluated with regard to the issuance of any discretionary approvals...* (Safety Element, Policy 10-24, page 10-38)

Figure 38 (Slope Inclinations) of the Draft EIR (page IV.D--5) illustrates portions of the project site that contain slopes of 15 to 25 percent and 25 percent or greater. The impact and mitigation findings presented in section IV.D (Soils and Geology) provide the basis for evaluation of these areas and/or generally unstable land prior to issuance of discretionary approvals for development on the project site. The project proposes some grading and urban development on slopes inclined between 15 and 25 percent. In the opinion of the EIR geotechnical consultant, 15 to 25 percent slopes are comparatively gentle and can be safely graded subject to detailed geologic/geotechnical investigation in conformance with the goals and policies of the County General Plan.

- *Approvals to allow the construction of public and private development projects in areas of high liquefaction potential shall be contingent on geologic and engineering studies which define and delineate potentially hazardous geologic and/or soils conditions, recommend means of mitigating these adverse conditions; and on proper implementation of the mitigation measures.* (Safety Element, Policy 10.21, page 10-34)

With implementation of mitigation measures presented in section IV.D (Soils and Geology), the project would be consistent with this policy. (NOTE: Please refer also to the response to Comment 85.53.)

- *Generally, residential density shall decrease as slope increases, especially above a 15 percent slope.* (Safety Element, Policy 10-28, page 10-38)

Project consistency with this policy cannot be accurately determined at this stage, since specific development plans (including grading plans) for proposed onsite planning areas have not been submitted. However, a comparison of Figure 6 (Proposed General Plan Amendment) and Figure 38 (Slope Inclinations) of the Draft EIR indicates that higher density residential uses are generally clustered in the portions of the project site where slopes are less than 15 percent.

- *Significant hillsides with slopes over 26 percent or more shall be considered unsuitable for types of development which require extensive grading or other land disturbance.* (Safety Element, Policy 10-29, page 10-38)

The Draft EIR (page IV.D--45) indicates that 23 acres with slopes equal to or greater than 26 percent are proposed to be graded and developed, and notes the potential project inconsistency with this policy.

- *Development shall be precluded in areas where landslides cannot be adequately repaired.* (Safety Element, Policy 10-30, page 10-38.)

With implementation of mitigation measures presented in section IV.D (Soils and Geology), the project would be consistent with this policy. (NOTE: Please refer also to the response to Comment 85.53.)

85.08 In keeping with CEQA guidelines for EIR content, particularly section 15125(b) regarding "Inconsistencies with Adopted Plans," the Draft EIR identifies and discusses "any inconsistencies between the proposed project and applicable general plans and regional plans." This guideline pertains to general plans and regional plans (i.e., policies).

85.09 In 1990, the voters of Contra Costa County passed Measure C which established the *65/35 Land Preservation Standard*, which was subsequently incorporated into the County's General Plan. This standard requires that no more than 35 percent of the land in the county contain urban development (including the urban areas in incorporated cities) and that the remaining 65 percent be preserved as agricultural land, open space, wetlands, parks, and/or other non-urban uses.

The General Plan and Measure C preclude the approval of a project that would exceed this 65/35 requirement. The Board of Supervisors, in considering the project, will review the project's consistency or compliance with these requirements.

85.10 Please refer to the response to Comment 85.07 above. The planning review and analysis of the project conducted by Contra Costa County Community Development Department staff will consider project consistency with County Code requirements such as that cited by this comment.

85.11 As stated in the Draft EIR (page III--10), the current project applications "*anticipate, but are not contingent upon, eventual annexation of all or a part of the project urban areas to the City of Brentwood.*" However, as suggested by this comment, eventual annexation to Brentwood is anticipated. Accordingly, the Draft EIR evaluates and distinguishes between impacts that would occur (1) if the project were developed in unincorporated Contra Costa County, and (2) if the project were developed within the City of Brentwood. Mitigation measures that involve development standards also refer to both County and City standards, where appropriate. (Please refer to the response to Comment 78.05 above.)

The EIR is required to describe and evaluate the project as proposed. The EIR is not required to explain why the applicant is currently seeking approvals from Contra Costa County, rather than the City of Brentwood. Please refer to the response to Comment 85.04 above for discussion of mitigation measure implementation if the project is annexed to the City of Brentwood. Please see response to comment 78.04.

- 85.12 Please refer to the response to Comment 1.17 for a discussion of the number of jobs assumed by the travel demand forecasting model, and to the response to Comment 2.13 for a discussion of the trip distribution predicted by the travel demand forecasting model. Also see Master Responses C, item 8, regarding the issue of insufficient transport and project site competitiveness as a set attraction center.
- 85.13 Please refer to the response to Comment 55.04. *Impact LU-10* and accompanying *Mitigation LU-10* address the general possibility of land use conflicts between the project and the Kellogg Creek Sand Quarry, including noise, dust, and unattractive views. As indicated in the response to Comment 55.04, dust impacts alone are not expected to be significant. *Mitigation LU-10* cross-references *Mitigation N-11*, which recommends setbacks and other measures that would reduce conflicts between the project and the quarry.

The Unimin Byron Sand Quarry is located a considerable distance east of the project site and the Kellogg Creek Sand Quarry. Neither of these plants appear on the BAAQMD's list of major emitters, and thus has calculated emissions of less than 100 pounds per day for all criteria pollutants. Whatever cumulative impacts these plant might have would be experienced, due to the prevailing westerly winds, east of the project site.

- 85.14 Project impacts on these underground pipelines are discussed in section IV.M. Specifically, for the underground natural gas pipeline implications, see Draft EIR pages IV.M--12 through IV.M--13; for petroleum pipeline implications, see page IV.M--13 and 14.
- 85.15 CEQA requires that the EIR identify any project conflict with applicable environmental plans or policies adopted by agencies with jurisdiction over the project. Agencies with jurisdiction over the project include the county, and various regional, state, and federal agencies (Bay Area Air Quality Management District, State Department of Fish and Game, U.S. Army Corps of Engineers, etc.). The County's adopted plans and policies are those that are reflected in the County General Plan. For each environmental topic area, the Draft EIR identifies relevant County and City General Plan policy as significance criteria for determinations regarding the significance of project impacts. Apparent project inconsistencies with these goals and policies are cited and discussed in the evaluation of land use impacts in Section IV.A (e.g., in the discussion of *Impact LU-1*, pages IV.A--32 through IV.A--33 of the Draft EIR), as well as other impacts throughout the EIR. The Principles and Guidelines for Cowell Ranch were adopted by the Board of Supervisors as administrative directives to County staff for consideration during the processing of the application; they do not constitute adopted plans or policies. Similarly, the Conditions for a 21st Century represent a statement of potential conditions for consideration by the County Planning Commission and Board of Supervisors; they do not constitute adopted plans or policies.

85.16 The policies cited by this comment represent an adopted general plan "policy direction" described by the City of Brentwood General Plan for the 5,550-acre area known as Special Planning Area (SPA) "J," which consists of the project site and additional acreage to the northwest along Briones Valley and Deer Valley Roads and to the northeast along Marsh Creek Road (see Figure 17 in the Draft EIR). Project consistency with the adopted general plan land use-related provisions cited by this comment is discussed below:

- *The maximum number of dwelling units should not exceed two dwelling units per acre.*

The project would be consistent with this provision, since the overall gross density of proposed residential development on the site would be approximately 1.07 units per acre (5,226 dwelling units on 4,906.89 acres). The remaining portions of SPA "J" are currently developed with agricultural and rural residential uses with residential densities well below the two-unit-per-acre maximum established by the General Plan policy direction. With development of 334 dwelling units on 20 gross acres in the remaining northeast portion of SPA "J", as described under *Impact LU-8* in the Draft EIR (page IV.A--50), the gross density of residential development in SPA "J" would be 1.13 units per acre (5,560 units on 4,926.89 acres), still below the two-unit-per-acre maximum.

- *A minimum of 40 percent of the SPA "J" area inside the County's ULL should be designated as open space or developed as park and recreation facilities.*

As indicated on page IV.A--32 of the Draft EIR, 931 acres of the project site within the proposed *Urban Limit Line* would remain as open space. This 931-acre area represents approximately 45 percent of the 2,077 total acres located within the proposed *Urban Limit Line*. The project would therefore be consistent with this SPA "J" provision.

- *The jobs/housing balance should be a minimum of 1:1.*

As indicated on pages IV.A--58 and IV.A--59 of the Draft EIR, the project at buildout would provide an estimated 6,628 jobs and 5,226 housing units, resulting in a jobs/housing ratio of 1.27 and a jobs/employed resident ratio of 0.84. *Mitigation LU-11* recommends applicant submittal of an *Employment Development Program* that would assist the project in achieving a closer balance between housing and jobs, thereby achieving greater consistency with this SPA "J" provision.

- *Employment-generating uses should be located adjacent to the planned SR 4 Bypass interchanges.*

As stated in the Draft EIR (page III--23), at-grade intersections at Concord Avenue, Marsh Creek Road, and Walnut Boulevard would serve as the primary project links to the SR 4 Bypass. As shown in Figure 6 (Proposed General Plan

Amendment) in the Draft EIR, the project proposes open space and community park uses adjacent to the Concord Avenue intersection; this area immediately adjoins the PG&E Gas Terminal and Compressor Station (see further discussion in section IV.M, Public Health and Safety), and would not be appropriate for employment-generating uses due to safety concerns. The project proposes *Business Park* and *Commercial/Office* uses (which would be employment-generating), as well as *Multi-Family Residential-Low* uses, adjoining the Walnut Boulevard intersections (see Figure 6). The project site does not immediately adjoin the Marsh Creek Road intersection. The project could be considered consistent with this SPA "J" provision.

- *The area outside the County's ULL should be designated for agricultural, recreational, or clustered rural residential uses.*

As illustrated in Figure 6 (Proposed General Plan Amendment) and Figure 7 (Existing and Proposed Urban Limit Line) of the Draft EIR, the project would designate the area of the project site outside the proposed *Urban Limit Line* as *Open Space*. As indicated in the Draft EIR (page III--23), the applicant proposes that areas within this designation be (1) dedicated to a public agency, (2) dedicated to a conservation organization, or (3) retained in private ownership with deeded development rights granted to the County. It is possible that agricultural, recreational, or clustered rural residential uses could occur within this area under the proposed *Open Space* designation. The project could therefore be considered consistent with this policy.

- 85.17 CEQA requires that the EIR identify any project conflict with applicable environmental plans or policies adopted by agencies with jurisdiction over the project. Agencies with jurisdiction over the project include the County and various regional state and federal agencies (Bay Area Air Quality Management District, State Department of Fish and Game, U.S. Army Corps of Engineers, etc.). ABAG is not a regulatory agency and has no jurisdiction over the project. However, ABAG's policies are reviewed in the EIR consistent with CEQA Guideline 15125(b), as follows:

Project consistency with these policies is discussed below.

- *Direct urban growth where regional infrastructure capacity, such as freeway, transit, water, solid waste disposal and sewage treatment is available or committed, and where natural resources will not be overburdened.*

Sections IV.C (Transportation) and IV.F (Public Facilities and Services) identify project impacts on transportation networks and other infrastructure, including infrastructure extensions necessary to serve the project. Sections IV.B (Agriculture) and IV.G (Biological Resources) identify project impacts on agricultural and biotic resources. The project has the potential to be inconsistent with this policy, since the project would result in significant unavoidable impacts on infrastructure capacity and natural resources, as identified in this EIR (e.g.,

precedent-setting impacts on nearby agricultural uses (*Impact AG-5*), and significant unavoidable impacts on the SR 4 freeway between Railroad Avenue and the SR 4 Bypass (year 2026) and on Vasco Road (year 2010 and year 2026)).

- *Encourage development patterns and policies that discourage long distance automobile commuting and increase resident access to employment, shopping, and recreation by transit or non-auto means.*

Sections IV.A (Land Use) and IV.C (Transportation) evaluate project resident commute patterns and access to employment, shopping, and recreation. The project has the potential to be inconsistent with this policy, since the project would result in significant unavoidable impacts on local roadways (i.e., the SR 4 freeway between Railroad Avenue and the SR 4 Bypass (year 2026) and on Vasco Road (year 2010 and year 2026)).

- *Establish firm growth boundaries for the urban areas of the Bay Area. Direct and permit urban development only within these growth boundaries.*

Section IV.A (Land Use) evaluates open space and other impacts associated with the project, which proposes an adjustment of the existing County-designated *Urban Limit Line*. The project could be considered inconsistent with this policy, since it would involve an adjustment of the *Urban Limit Line*.

- *Encourage the provision of housing opportunities at all levels.*

Mitigation LU-3 in the Draft EIR recommends that the applicant be required to submit a *Project Housing Strategy* that specifies project housing affordability goals, and an associated *Housing Mix and Affordability Monitoring Program* that evaluates progress in meeting affordability goals. This mitigation would ensure that the project achieves consistency with this policy.

- *Allow for development of new communities along transit corridors where interurban transit service and capacity are available or committed when they would be consistent with regional or subregional goals and objectives, and (will) not negatively affect existing communities.*

Sections IV.A (Land Use) and IV.C (Transportation) evaluate project impacts on the existing community of Brentwood, and the availability of transit service to serve the project. *Mitigation T-12* recommends shuttle service to regional transit systems and recommends compliance with Tri-Delta Transit or another transit provider requirements.

- 85.18 Please see responses to comments 2.35 and 78.22. Project alternatives with reduced urban areas and reduced urban intensity, and their comparative open space impacts, are addressed in Draft EIR section V. Alternatives; see Alternative A. No Project, Alternative B. No General Plan Amendment, and Alternative C. Mitigated Alternative.

- 85.19 The impact discussion on Draft EIR p. IV.A--35 conveys the important point made in this comment with the following statement:

"The addition of 13,076 new residents would in turn cause potentially significant traffic, public services, noise, air quality, and other impacts, which are described in subsequent sections of this EIR."

- 85.20 Regarding the housing affordability goals, the Draft EIR mitigation conclusion is based on the assumption that the county will enforce this integration through the recommended program of ongoing reporting, monitoring, and enforcement.

The Draft EIR considers and references the cited county General Plan policy regarding housing affordability on Draft EIR page IV.A--34.

The project development agreement does not include stipulations for affordable housing.

Regarding county and city compliance with ABAG-identified regional housing needs, whether or not the county or city has met the projected needs would not affect the basic Draft EIR impact and mitigation conclusion regarding project housing affordability compliance with regional, county, and city requirements (*Impact/Mitigation LU-3*).

The concern regarding project housing affordability and associated effects on maintaining a balance between housing and jobs for traffic congestion and air quality control purposes is fully addressed in the Draft EIR; see Master Response C, especially item 1.

- 85.21 Please see response to comments 80.01, 85.02, 85.172, and 63.05 with respect to deferred mitigation. With respect to the Housing Strategy implementation, the requirement for a county-approved strategy would be incorporated as part of the project development agreement, as specified on Draft EIR page IV.A--59.

- 85.22 The reasons the Draft EIR states that these mitigation "options" would not be consistent with the Brentwood General Plan SPA "J" policies are sufficiently described on Draft EIR pages IV.A--37 and IV.A--39.

- 85.23 See Master Response C, items 2, 5, and 6.

- 85.24 The Draft EIR conclusion that the project could have a significant adverse impact on commercial retail and office development has been amended to explain that there is not sufficient evidence to indicate that project-related effects on the market for commercial and office space in central Brentwood could ultimately result in substantial deterioration of properties in central Brentwood, i.e., a significant adverse environmental impact. This amendment is based on the following:

- Brentwood's General Plan and General Plan EIR anticipated development of a larger scale (approximately 10,000 units) than the proposed project and anticipated similar types of uses like that proposed,
- The Brentwood General Plan EIR included a mitigation measures which mitigated the potential impacts of "focus areas with their own centers," like Cowell, by adopting policies that would strengthen the historic downtown of Brentwood by promoting it as a civic, entertainment, and cultural center (see Brentwood General Plan EIR Policy 3.1, p. 43). The Brentwood General Plan EIR indicates that development of such focus centers will not be inconsistent with city intentions for the rest of the community.
- The Brentwood General Plan establishes *Neighborhood Business* area designations and other development generators at major future interchanges along the planned State Route 4 Bypass. All are intended to serve subareas of the City, and their approval and development would be scrutinized by the City of Brentwood for compatibility with commercial uses in downtown Brentwood.
- Any new commercial development in the area has the potential to take business away from existing commercial uses. However, as the population grows, so does the demand for goods and services. The Brentwood downtown could not realistically absorb all new commercial demand within the city.
- No specific evidence exists that project effects on the demands for existing and future retail and office activities in central Brentwood could be expected to eventually lead to the physical deterioration of existing office and retail properties in central Brentwood.

85.25 The Draft EIR section referenced in this comment (page IV.A--43) cites reasons stated by the applicant's economist why the project is expected by the applicant "to be able to capture the demand for approximately 250,000 square feet of industrial development due to its proximity to affordable housing....," which is an optimistically high market forecast. The applicant wants to demonstrate a comparatively high industrial development (employment) absorption rate, and associated onsite employment opportunities, in the early years of the project as a means of reducing exterior vehicular trips.

The Draft EIR evaluates what the potential impacts on local industrial businesses in the subregion would be if the applicant's projection of a high project industrial floor area buildout rate proves correct. To the degree that the applicant's projection does not occur, the potential for this particular impact would be correspondingly reduced. Therefore, there is no EIR purpose in verifying the applicant's supporting assumptions regarding project industrial space demands, including the applicant's statement about the availability of affordable housing. With respect to other types of environmental impacts that may occur if the applicant-anticipated pace of industrial development buildout does not occur, the Draft EIR addresses such impacts through its various

housing-jobs balance maintenance recommendations (please see response to Comment 85.176).

- 85.26 The EIR preparers believe that the combination of land use, visual, noise, and traffic mitigations recommended throughout the Draft EIR represent a sufficient Master EIR appraisal and identification of mitigation needs. Please note that the applicant has submitted project revisions that would realign Cowell Ranch Parkway to avoid the John Marsh Home site (see Comment 84.01).
- 85.27 Project feasibility, financing, fiscal impacts, and mitigation costs are not CEQA-mandated environmental topics, i.e., do not involve physical effects on the environment and under CEQA section 15131 cannot be identified as significant environmental impacts. Mitigation cost can become relevant as a factor determining whether a mitigation is or is not feasible, however. Under Public Resources Code section 21081(a)(3), economics can be used as a factor to support a finding or mitigation measure infeasibility. However, the mere fact that a mitigation alternative may be more expensive does not make it infeasible.

The final determination of the feasibility of a mitigation measures is made by responsible agency decision makers when they prepare the CEQA-required findings. Project impact mitigation responsibilities have been adequately specified in the Draft EIR (see pages II--1 through II--67), and will be further described in the CEQA required mitigation monitoring program and findings prior to Final EIR certification.

- 85.28 See response to comment 85.13.

- 85.29 These comments pertaining to the Draft EIR discussion of project-related jobs/housing balance impact and mitigation identification adequacy are paraphrased and responded to below:

Proposed jobs/housing mitigation is not adequate, there is an absence of enforceable measures to mitigate jobs/housing impacts. See Master Response C, item 1 and Master Response B.

Vague future mitigation measures are not adequate; mitigation should be developed now and included in requested development agreement. See Master Response B.

Issuance of building permits should be conditioned upon achieving employed resident targets. The ultimate goal of the Draft EIR-recommended jobs/housing balance measures is to reduce project-generated peak-hour vehicular trips. The appropriate "target" identified in the Draft EIR is achievement of adopted roadway operational **performance standards** on the future local and regional roadway network through a combination of possible mitigation means, including measures to improve the local balance between jobs and housing. See Master Response C, items 1 and 5. Also, see Response 74.65.

Achievement of targets should not be excused on the basis of regional economic and market cycles, as suggested in the Draft EIR. The issue of jobs/housing balance is thoroughly addressed in the Draft EIR as an important transportation management factor and key to reducing peak hour vehicular trip generation by the project. The key concern is to reduce (mitigate) the project's future peak hour impacts on local and regional roadway system operation. The Draft EIR states on page IV.A--61 that among the many issues the Board of Supervisors should consider in establishing quotas for future residential building permits within the project is "the fact that the applicant will not be able to control certain factors affecting job creation, including regional economic and market cycles." This consideration does not excuse the project from meeting the fundamental local and regional roadway operation mitigation requirement identified in the Draft EIR under *Impact T-1*--i.e., the requirement that future adopted **performance standards** for the various roadway network components subject to potentially significant project-related impacts be achieved as a condition of individual residential and non-residential development project approvals within the project area.

DEIR mentions additional transportation and air quality controls beyond those recommended in the EIR; what are these measures? The Cowell Ranch project includes an anticipated 30-year buildout period; projection of the cumulative transportation, land use, and economic conditions which will be affecting local and regional roadway operation in the area in 15 years, let alone 30 years, is a highly speculative exercise. It is not reasonable to assume that the various conditions that will be affecting local and regional roadway operation 30 years from now, including regional land use, economic, and transportation conditions, and associated transportation planning and improvement methodologies can be reliably foreseen today as a basis for establishment of precise future (30-year) mitigation details (jobs/housing quotas, roadway design specifics, fair share funding amounts, etc.).

The Draft EIR identifies a comprehensive set of mitigation measures considered at this time to be adequate and sufficient to mitigate project impacts on local and regional transportation. The purpose of the note on Draft EIR page IV.A--60 is to provide a CEQA basis for future County decision-makers to impose additional mitigation measures beyond those which can be currently foreseen without excess speculation. A Lead Agency is not required to predict the unforeseeable (CEQA Guidelines, Sections 15144, 15145)

Who will provide the internal transit system; how would it be funded? Implementation of the internal transit system requirement identified under *Mitigation LU-12* on Draft EIR page IV.A--63 "(shuttle buses or demand-responsive vans)" would be an applicant responsibility. These and other mitigation responsibilities will be identified by the Lead Agency in the *Mitigation Monitoring Plan* to be included with the CEQA findings for the project, as explained and outlined in section VII of the Draft EIR (Mitigation Monitoring Plan).

- 85.30 The impacts of the two likely SR 4 Bypass alternative alignments are thoroughly addressed in the Draft EIR (especially see pages V--16 through V-25). If the alignment changes significantly, additional environmental documentation may be required.
- 85.31 The comment does not acknowledge that the referenced mitigation measures *LU-16* includes specific references to other sections of the EIR for each of the various mitigation details, including where appropriate, design criteria--IV.J (Visual Factors), IV.K (Air Quality), and IV.L (Noise). The point of *Mitigation LU-16* is to simply coordinate the design of these three mitigation aspects.
- 85.32 Project site rangeland characteristics are described on Draft EIR page IV.B--1 (approx. 1,500 head of cattle grazed each year). *Impact AG-2* was intended to include project-related pasture and rangeland losses. In response to this comment, Draft EIR page IV.B--21 has been revised to include specific references to pasture, range, and rangeland. The project would eliminate approximately 1,200 acres of rangeland; this estimate consists of the 1,269 acres proposed for development, minus the 217-acre apple orchard (to be developed) and the portion of the alfalfa field on the east side of Marsh Creek Road (to be developed).

In response to this comment, the acreage figures in Table 12 for the year 1990 have been corrected (see section IV, Revisions to the Draft EIR (Errata)). These changes do not alter the meaning or conclusions presented in the Draft EIR.

- 85.33 Section IV.B (Agriculture) of the Draft EIR identifies relevant Contra Costa County and City of Brentwood planning provisions, and uses these provisions as significance criteria for determinations regarding the significance of project impacts. Relevant inconsistencies with these goals and policies are cited and discussed in the evaluation of agricultural resource impacts in Section IV.B (e.g., in the discussion of *Impact AG-1*, pages IV.B--18 through IV.B--20 of the Draft EIR). This approach is consistent with CEQA Guidelines section 15125(b), which states that "*the EIR shall discuss any inconsistencies between the proposed project and applicable general plans and regional plans*" (emphasis added). The CEQA Guidelines do not appear to require an exhaustive discussion of project consistency with each potentially applicable goal or policy, but rather an indication of project inconsistencies with relevant planning documents.

The discussion of *Impact AG-1* on pages IV.B--18 through IV.B--20 of the Draft EIR discusses the County General Plan policies cited by this comment. These policies form the basis for the finding of a significant unavoidable impact on prime agricultural lands. Discussion of the agricultural-related guidelines (Guidelines 1.b and 5.b) from the Principles and Guidelines for Cowell Ranch cited by this comment was also included in the Draft EIR (but these principles are not described as adopted policy). Please refer to the response to Comment 85.15 for discussion of project consistency with the Guideline 5.a, regarding development within the *Urban Limit Line*.

- 85.34 With regard to the wetland inclusion vs. exclusion comment, please see response to similar Comment 85.179. With regard to the CCWD easement and SR 4 right-of-way inclusion vs. exclusion comment, the Draft EIR assumes that these two components, totalling approximately 11 acres, will ultimately be removed from the prime soils inventory based on actions anticipated by the CCWD and county with or without the project; i.e., these actions are not part of the subject project, but are expected to remove another 11 acres from the existing prime soils inventory within the project boundary.
- 85.35 See response to comment 2.35.
- 85.36 The Draft EIR describes project impacts on these Agricultural Core lands on pages IV.B--13, 14, 18, 19, and 20. In response to this and similar comments, Draft EIR pages IV.B--18 and 20 have been revised to clarify the point that the County's *Agricultural Core* designation applies to properties that contain primarily Class I and II soils (i.e., *prime soils*) as already explained on Draft EIR page IV.B--14. Thus, *Impact AG-1* pertaining to loss of approximately 357-acres of prime soils includes project conversion of approximately 25 acres of designated *Agricultural Core* land.
- 85.37 Please refer to the response to Comment 85.32 above, and to the revisions on page IV.B--21 in section IV, Revisions to the Draft EIR (Errata). As indicated, the County has lost a cumulative total of approximately 186,940 acres of agricultural land since 1940. The project and other pending and anticipated urban developments in the subregion would contribute to this trend. As indicated in Tables 9 and 10 of the Draft EIR, the pending developments cited on page IV.B--21 would convert the following approximate acreages to urban use:
- Brentwood Country Club: approximately 350 acres
 - Pittsburg Southeast Annexation Area: approximately 2,745 acres
 - Dougherty Valley Specific Plan: approximately 5,979 acres
 - Tassajara Valley Specific Plan: approximately 6,000 acres

These losses in rangeland (or potential rangeland) would contribute to cumulative losses in the Central Valley and statewide, as noted by the commenter. It should be noted, however, that, for purposes of determining the significance of cumulative rangeland losses identified in *Impact AG-2*, the applicable criterion is whether the project would "conflict with applicable environmental plans or policies adopted by the agencies with jurisdiction over the project" (see Criterion #4 on page IV.B--17 of the Draft EIR). Since Contra Costa County is the agency with jurisdiction over the project, the analysis focuses on countywide agricultural land losses.

The EIR estimate of agricultural acreage lost in the County since 1940 differs from that estimated in the Contra Costa County General Plan due to fluctuations in crop report information between 1990 and 1992, as shown in revised Table 12 (see section

IV, Revisions to the Draft EIR (Errata)). This fluctuations have no substantial effect on the EIR's conclusions regarding project and cumulative impacts.

- 85.38 See response to comment 2.35. Since agricultural land cannot feasibly be created to replace the lost land, measures such as acquisition of replacement prime soils, as suggested by the commenter, would not reduce the impact to a less-than-significant level.
- 85.39 The EIR includes mitigation recommendations for agricultural traffic impacts under *Mitigation T-4* on Draft EIR page IV.C--62.
- 85.40 The Draft EIR finds that effective implementation of the combination of the numerous measures listed, including the fencing and leash law compliance provisions, would reduce related project impacts to a less than significant level (setbacks, buffers, landscaping, fencing, notification). The conclusion is based on county experience with comparable situations.
- 85.41 The setback dimensions represent conventional distances considered desirable by county planning staff based on experience with similar situations. No significant noise impact associated with adjacent agricultural activity has been identified (see section IV.L). The conventional setback and notification measures recommended, in combination with ongoing enforcement/compliance with established federal and local health regulations for the handling and application of agricultural chemicals, would in the judgment of the EIR consultants, be adequate to reduce these identified "nuisance" impacts to less than significant levels (see significance criteria on pages IV.B--16 and 17). These requirements represent recognized standards commonly applied in the County and in other jurisdictions. The commenter does not explain why he/she believes the mitigation measures will not mitigate the impacts identified and fails to provide evidence to support the position. Without such information it is not possible to specifically respond to the commenter's concerns.
- 85.42 The comment is incorrect regarding the "only one-sentence description." The referral here is to a full discussion of potential land use compatibility problems on Draft EIR pages 22, 23 and 24. The Draft EIR includes an additional discussion of the potential for conflict between agricultural and project traffic on pages IV.C--62 and 63. The *Mitigation AG-4* reference to the mitigation measures listed for AG-3 is appropriate, since all of the measures apply to the action to be taken onsite (i.e., incorporated into the project itself) to mitigate project impacts on offsite agricultural uses. The AG-3 measures are not intended for, nor is there any suggestion that they are intended for, application to offsite properties.
- 85.43 Comment acknowledged. *Mitigation AG-5* has been revised to include reference to *Mitigation AG-1* and *AG-2* (avoidance of prime agricultural soils); see section IV herein, page IV.B--26 errata. No new impact or mitigation measure has been added here that was not considered in the original Draft EIR.

- 85.44 The EIR evaluates potential project impacts on remaining offsite agricultural lands on pages IV.B--25 through 26. The fact that a Williamson Act contract is canceled or terminated does not necessarily mean that urban development will occur.
- 85.45 Please refer to the response to Comment 1.20 for a discussion of the methodology of projecting future year roadway improvements for the future year analysis and the availability of funding for these improvements.
- 85.46 The comment states that the proposed mitigation measures at three of the study intersections would be "...unworkably complex and would not reduce impacts to insignificance," based on supporting documentation provided by Smith Engineering and Management in a letter dated January 29, 1997. This statement, which is not quoted directly from the supporting letter, is in error, as the level of service calculations performed in connection with the Draft EIR's traffic impact analysis clearly indicate that the recommended improvements would fully offset the identified impacts at the specified locations.

The commenter has not provided evidence to justify the assertion that the mitigation measures are not feasible. Certainly, the recommended measures would result in substantial modifications to the intersections, but the improvements would create intersections similar to those found in urban and suburban locations throughout California and the nation. The improvements called for are well within the range of competence of any roadway design engineers who may be called upon to implement the improvements.

- 85.47 Please refer to the response to Comment 2.13 for a discussion of the trip distribution predicted by the travel demand forecasting model, and to the response to Comment 36.01 for a discussion of the commute pattern assumptions that formed the basis for the Draft EIR traffic analysis.
- 85.48 Please refer to the response to Comment 2.13 for a discussion of the trip distribution predicted by the travel demand forecasting model.

Additionally, it should be noted that East County is located much further from activity centers in other counties than any other portion of Contra Costa County; therefore, the countywide average cited by this comment was not considered to be applicable in this case.

- 85.49 This comment is in error with regard to the east-west arterial between Balfour and Marsh Creek Roads. The Draft EIR does not call for construction of that road, as the comment suggests. Instead, the pertinent mitigation measure (*Mitigation T-2*) simply calls for the project to "...preserve the opportunity for a new east-west arterial south of Balfour Road..." Preservation of right-of-way would have no adverse environmental impacts. Only at such time as it is determined that the east-west roadway should be built would any environmental analysis be required.

With regard to the Concord Avenue closure, in the course of considering various previous development proposals, the City of Brentwood has considered the ultimate configuration of this roadway. In its comment letter on the Draft EIR dated February 25, 1997, the City describes a phased road system that ultimately calls for connecting Concord Avenue as either a full T-intersection with Fairview Avenue, or as a right-turn in/out only T-intersection, with the objective of providing a safe and necessary circulation pattern and reducing traffic entering the *Agricultural Core*. Thus, this mitigation measure simply reflects plans already defined and evaluated by the City of Brentwood.

- 85.50 *Impact E-2* on page IV.N-6 of the Draft EIR identifies project energy consumption impacts as significant. This finding would not change even if it were determined that some of the trips estimated in the Draft EIR would be longer since the impact statement already indicates that "the project would be expected to result in comparatively wasteful uses of transportation fuel..." Likewise, *Mitigation E-2* would still be required to reduce transportation-related energy consumption impacts to a less-than-significant level. Please refer to the response to Comment 85.48. No revisions to the Draft EIR analysis of transportation-related energy consumption are required.
- 85.51 The proposed project design lists a number of components that are designed to encourage the use of transit to and from the project, including the provision of shuttle buses and an adequate number of bus stops. These efforts are designed to encourage the provision of transit service from the local transit agencies, especially Tri-Delta Transit. As recommended by *Mitigation T-1*, the project applicant should coordinate the provision of transit service with these transit operators. Additional requirements to guarantee adequate operation of transit services may be considered as part of *Mitigation T-12*. The mitigation measures clearly states that, if transit service cannot be extended to the site, the unmet demand for this service and associated traffic congestion impacts would represent a significant, unavoidable impact.
- 85.52 In the opinion of the EIR geotechnical consultants, there is adequate information at this stage in the project review process to: (1) identify the general type and probable range of potential geologic/geotechnical impacts, (2) assess geotechnical feasibility of the proposed land use plan and conceptual grading plan, and (3) form an opinion regarding general conformance with the goals and policies of the *Safety Element* of the Contra Costa County General Plan. The recommended mitigation measures provide a level of detail appropriate for this Master EIR. Please refer to the response to Comment 74.42 for further discussion of the approach to the geotechnical analysis undertaken for this Master EIR.
- 85.53 Please refer to the response to Comment 74.42, and to the responses to Comments 63.05 and 80.01 regarding the use of master EIRs. The commenter is incorrect in stating the applicant is seeking very specific project approvals. The applicant is

seeking general, conceptual approvals; for example, the requested development agreement will only encompass the present project applications (i.e., general plan amendment, rezoning and conceptual preliminary development plan), if approved. As explained in the response to Comment 85.02, the preliminary development plan (PDP) is a generalized PDP that does not contain all of the specific elements set forth in Section 84-66.1006 of the Ordinance Code.

Mitigation measures mentioned in this comment (*Mitigation SG-2 through SG-14*) do not equate to an inappropriate deferral of mitigation, as suggested by the commenter. The Draft EIR has concluded that, as long as the criteria recommended as mitigation are implemented in site-specific projects, the geotechnical impacts would be mitigated to a level of insignificance. The certainty of the success of the recommended mitigation measures is explained on pages IV.D--34 and IV.D--35 of the Draft EIR.

It is appropriate and adequate to make a commitment at this preliminary plan level to prepare specific geotechnical investigations at the time that specific project approvals are brought forward. Adequate criteria are identified for each of the mitigation measures. Future projects would have to meet the requirements set forth in the mitigation measures. In reviewing the future projects, if the agency determines there is an unexpected or greater impact that was not analyzed in the master EIR, then subsequent environmental review would be required as mandated in Public Resources Code section 21157.1.

Also, see Master Responses A and B.

85.54 Please refer to responses to Comments 85.07 and 85.52 above.

85.55 Comment acknowledged. In response to the first item in this comment, the EIR has been revised to include a more detailed description of the Coast Range-Central Valley (CRCV) fault system (also referred to as the Coast Ranges Sierran Block system) (see section IV, Revisions to the Draft EIR (Errata)). However, seismic hazards and peak accelerations, and corresponding impact and mitigation findings, are unchanged. In addition, it should be noted that Caltrans, in its *Technical Report to Accompany Caltrans Seismic Hazard Map 1996* (July 1996), recommends maximum peak accelerations of 0.7g for the CRCV fault system due to uncertainties in the near field region of the fault zone and the engineering significance of high peak accelerations. Caltrans recommends "in regions close to the sources where high PA's (peak accelerations) would exceed 0.7g, one should apply attenuation relationships with caution."

In response to the second item in this comment (regarding conflicting information on the seismic activity of mapped faults), a paragraph has been added to the EIR to clarify the status of research regarding these faults (see page IV.D--18A in section IV, Revisions to the Draft EIR (Errata)). The added discussion indicates that, while the Department of Water Resources (1978) and Wong and Biggar (1988) have concluded

that the Brentwood Fault and the Davis, Vaqueros, and unnamed parallel faults may be seismically active, these researchers and others have found no evidence of surface displacement of these faults in Holocene or late Pleistocene time. The CDMG has not designated these faults as "active" AP zones, and therefore there is no State requirement that geologic studies be performed to evaluate fault rupture potential for development along these faults. Nonetheless, these faults are regarded as having a low potential for producing small surface displacements, as explained in the Errata. This clarification is provided for information only, and does not alter the meaning or conclusions presented in the Draft EIR. Determination of whether the faults are active or inactive and associated siting of project facilities, as suggested by the commenter, is outside the scope of the EIR.

In response to the third item in this comment (regarding conflicting information about the Davis Fault), text has been added to the EIR's description of the Davis Fault to indicate that "the 1978 DWR report suggests that it is a normal fault with the east block of the plate apparently downdropped" (see page IV.D--19 in section IV, Revisions to the Draft EIR (Errata)). Please refer also to the response to Comment 85.161. This clarification is provided for information only, and does not alter the meaning or conclusions presented in the Draft EIR.

- 85.56 As explained in the revised EIR text (see section IV, Revisions to the Draft EIR (Errata)), a peak ground acceleration of 0.7g is appropriate for the characteristic earthquake occurring in the project vicinity on the Coast Range-Central Valley (CRCV) fault system. As suggested in *Mitigation SG-14*, implementation of mitigation measures regarding Marsh Creek Reservoir stability would need to occur prior to development of project structures. Mitigation monitoring would ensure that project development does not occur until the mitigation is carried out.
- 85.57 Please refer to the response to Comment 74.42, and to the response to Comment 80.01 regarding the use of Master EIRs.
- 85.58 Please refer to the response to Comment 74.42, and to the response to Comment 80.01 regarding the use of Master EIRs.
- 85.59 Please refer to the response to Comment 74.42, and to the response to Comment 80.01 regarding the use of Master EIRs.
- 85.60 Comment noted. *Impact SG-11: Ground Shaking* and the related *Impact SG-12: Ground Failure* are parallel impacts and should be considered together, along with their accompanying *Mitigations SG-11* and *SG-12*. In response to this comment, *Mitigation SG-11* has been revised to require adherence to Structural Engineers Association of California (SEAOC) guidelines, in addition to Uniform Building Code seismic standards. Important infrastructure, essential and "safety critical" facilities should be designed using "performance-based" seismic design guidelines published by SEAOC. Implementation of these mitigation measures would reduce seismic-

related risks to levels ordinarily acceptable for projects of this type in this region and reduce the impacts to less-than-significant levels.

85.61 The comment questions the conclusion of the Draft EIR that the downstream flood control improvements on Marsh Creek will be mitigated to a level of insignificance, since the details of the mitigation are subject to additional study. Please refer to the response to Comment 59.01.

85.62 The comment asserts that the project will create increased storm flows on Kellogg Creek and that the downstream flood control improvements need to be defined and assessed as part of the Cowell Ranch EIR.

See response to Comment 59.04. Also, the "fair share" requirement is appropriate since the project is only a partial contributor to the flows in Kellogg Creek and the flood control needs would exist with or without the project.

85.63 The comment questions the conclusion of the Draft EIR that the impacts to Dry Creek would be mitigated adequately by the proposed measures.

Comment noted. See response to Comment 59.05 and modification of *Mitigation D-6*.

85.64 The comment questions the analysis and mitigations proposed for soil erosion impacts.

The commenter mischaracterizes and oversimplifies the mitigation measures specified to address potential soil erosion impacts. The measures specified include sufficient, well-established practices and safeguards for mitigation of potential soil erosion impacts (i.e., City/County ordinances and ABAG Manual of Standards for Erosion and Sediment Control Measures and the California Storm Water Best Management Practices Handbooks). The commenter does not point out any site-specific erosion problems or issues that would not be covered by the proposed measures. Compliance with the identified erosion control measures, practices and procedures provides the "meaningful information" and the assurance that the soil erosion impacts associated with the development of the project site would be mitigated to a less-than-significant level.

With respect to *Mitigation D-7*, the Marsh Creek Reservoir sediments have been found have mercury concentrations below the level that would be considered a hazardous waste. See discussion of Marsh Creek sediments and mercury sampling in section IV.M of the Draft EIR. Based on analysis of the sampling results, the conclusion has been reached by the EIR authors and by other investigators that the removal of sediment from the reservoir (as may be necessary per *Mitigation D-7*) does not pose a significant risk to public health. Removal of sediments from Dry Creek or Marsh Creek Reservoir would reduce, not increase, the amount of mercury in the reservoir. Since the excavation would necessarily take place in areas and at times when the

water level was at a low point, there would be no threat of re-suspending the mercury in the water column or increasing the uptake by fish.

- 85.65 The comment questions the analysis and measures to control the effects of urban runoff pollutants. Please refer to the response to Comment 67.19.
- 85.66 The comment questions the measures proposed for mitigation of water quality effect of golf course chemical use and calls them "vague."

The measures identified in the Draft EIR for mitigation of potential golf course water quality impacts are more extensive than cited in this comment. The commenter should review pages IV.E--31 to 34 for a better understanding of the proposed mitigation measures. Also, see responses to Comment 39.29 for additions to the measures to be incorporated in the recommended "Golf Course Environmental Management Plan." The measures proposed are consistent with state-of-the-art practices and requirements for new golf course development in some of the most sensitive watershed areas (e.g., Carmel Valley); they are appropriate and, if implemented, would provide necessary protection against adverse water quality impacts from a golf course at the Cowell Ranch site.

With respect to consideration of reclaimed water use for golf course irrigation, please see responses to Comments 49.01 and 85.186. The EIR authors disagree with the assertion that use of reclaimed water will reduce the potential for nitrate-water quality impacts from golf course turf grass maintenance, and the commenter's have provided no evidence to support this assertion.

- 85.67 The comment challenges the water supply analysis in the Draft EIR, suggesting that a firm source of water has not been identified and citing references to another "phased" development project (Diablo Grande in Stanislaus County) that identified a secure water source for only the initial phase of development.

The EIR authors disagree with the suggestion that the Cowell Ranch water supply is analogous to the Diablo Grande case cited. The Cowell Ranch project has an identified source of water supply and an irrevocable agreement for sufficient water for the entire project water demand, not simply for the first phase as described to be the case for the Diablo Grande example. In the Cowell Ranch case, what has been deferred for additional study are the engineering, economic and environmental analyses of the facilities needed to treat and deliver the water supply to the project. These will be addressed in more detail when specific applications for final development plan and/or subdivision maps are considered. Please refer to the response to Comment 74.39 for further discussion.

- 85.68 The comment asks for an analysis of the cumulative water supply impacts of the project on other projects in Contra Costa County that have recently been built, approved, are under construction or are being planned.

This comment asks that the EIR for the Cowell Ranch project study the entire regional water supply for Contra Costa County. The water supply for the Cowell Ranch project is planned to be supplied locally from existing surplus water that has been withdrawn and used historically in the project area under established water rights of the ECCID and/or BBID. As such, the project would not increase the water demand in the immediate project area or regionally. The project does not propose to utilize water that has already been allocated to other projects that have been recently built, approved or are under construction. Such projects have been subject to their own previous environmental review, and there is not basis to require this EIR to repeat/redo the analysis. Additionally, the project does not propose to develop water supply facilities for the use of other development that may be planned and developed in the future within the region. To the extent that the Cowell Ranch project utilizes currently available surplus water from the ECCID and/or the BBID, such water would not be available for future development proposals that would potentially seek to obtain this water as a source of supply. This would clearly limit the water supply options available to future development. Presently there are no identifiable projects that have proposed to make use of the water supplies that are proposed for use by the Cowell Ranch project.

- 85.69 The comment asks for analysis of reclaimed water as a possible source of non-potable water uses (i.e., golf course and landscape irrigation) within the project.

Please refer to the responses to Comments 49.01 and 85.186. The policy cited in the comment requires that opportunities for use of reclaimed water be identified. It is beyond the scope of this EIR to describe and evaluate reclaimed water transport and distribution systems as requested in this comment. Any reclamation use, if implemented, would be developed in cooperation with local sewerage and water agencies, and would be subject to a project-level analysis of the treatment and distribution facilities and the potential impacts associated with the reclaimed water use. Specific standards and procedures exist for the production and use of reclaimed water (see Title 22, California Code of Regulations, Wastewater Reclamation Criteria). Ultimately, the authority for approving and permitting water reclamation projects lies with the Regional Water Quality Control Board and the State Department of Health Services.

- 85.70 The comment asks for detailed analysis of all the environmental impacts associated with the development of sewer services for the project. Specifically, the commenter is interested in an evaluation of the impacts associated with the expansion of the Brentwood wastewater facilities.

The expansion of Brentwood's wastewater treatment plant will be subject to a detailed environmental analysis that will provide the opportunity to address and answer the specific environmental impact questions raised in this comment (e.g., relative to Marsh Creek water quality, land for the treatment facilities). Such analysis is not within the

scope of the Cowell Ranch EIR; the questions are appropriately addressed within a project-level environmental study of the treatment plant expansion.

The trunk sewer line that would be extended to serve the Cowell Ranch project is not planned to be constructed with excess capacity to serve development beyond the Cowell Ranch site.

- 85.71 The comment questions the deferral of the project-specific impacts associated with wastewater facilities that would be needed to serve the project.

There is sufficient information from studies done for the applicant (see response to Comment 49.01) and for the City of Brentwood (see Draft EIR pages IV.F--30 to 32) to conclude that there is more than one feasible means of providing sewer service to the Cowell Ranch project. It is not the purpose of this Master EIR to select the preferred sewerage plan, nor is it the role of this Master EIR to identify and evaluate the specific environmental impacts associated with each of the alternatives. These will be subject to detailed, project-level analysis and environmental review. The County and the public will be afforded full opportunity to review the wastewater treatment and disposal plans in accordance with the CEQA process. The reference in the comment to approval of improvement plans for each component of development (*Mitigation PF-5*) applies to the construction of water and sewer lines, which is appropriate. Also, see the addition to *Mitigation PF-5* in response to Comment 78.51 from the City of Brentwood, relative to required updating of the City Infrastructure Master Plans for water and sewers. Please refer to the response to Comment 2.24.

- 85.72 Please refer to the response to comment 74.57. Pages IV.F-50 and IV.F-56 and -57 provide an adequate level of detail necessary in an EIR regarding the contents of the *Public Services and Facilities Plan*. Provision of police and fire protection facilities and services is a fairly routine matter with adequate County and City policies to provide guidance for acceptable standards. Likewise, there are conventional financing mechanisms identified in the Draft EIR that can be implemented to pay for these services.

Please note that the *Public Services and Facilities Plan* must include the specific criteria outlined on pages IV.F--47 and IV.F--48 of the Draft EIR. Conformance with these criteria would provide for reasonable information to allow a determination to be made that the impact has been mitigated to a less than significant level. In addition, please be advised that the project applicant must conform to the County General Plan *Growth Management Element* requirements which require specific performance criteria for the applicant's provision of police and fire protection.

- 85.73 The commenter has not provided evidence to justify the assertion that there are adverse environmental impacts associated with the construction of necessary police and fire stations other than impacts already discussed in the Draft EIR. Further, the County has no evidence that noise, traffic, water supply or land use would be

adversely affected by the location of emergency services facilities within the proposed project area. Absent of such evidence, no additional discussion can be provided.

- 85.74 The fire protection section of the Draft EIR adequately addresses the fire protection concerns raised by the project.
- 85.75 The Draft EIR includes mitigation measures (see *Mitigation PF-17*) that adequately reduce impacts of the project on the John Marsh House. The applicant has indicated that changes will be incorporated into the Final Development Plan for the project to reduce project impacts on the John Muir House.
- 85.76 The actual number of students generated by the project may vary slightly depending upon the specific types of units that are ultimately constructed and the characteristics of the households that ultimately occupy the project. However, the findings of the Draft EIR, that the project would have a *significant impact* on the capacity of the Brentwood Unified School District, do not change whether 1,113 or 1,157 elementary school students and 485 or 503 middle school students (minor differences) are generated by the project (as estimated in the EIR and in this comment, respectively). Likewise, the associated mitigation measure (Mitigation PF-18 on page IV.F-81) remains valid for each estimate. The findings of the Draft EIR, that the project would have a *significant impact* on the capacity of the Liberty Union High School District, do not change whether 583 or 609 high school students (a minor difference) are generated by the project (as estimated in the EIR and in this comment, respectively). Likewise, the associated mitigation measure (Mitigation PF-18 on page IV.F-81) remains valid for both estimates.
- 85.77 *Mitigation PF-18* requires the preparation of a *School Financing and Cost Distribution Plan*. This plan will identify funding mechanisms required for the proposed school improvements. The mitigation measure suggests funding options, and sets forth the criteria that must be included in the plan. Conformance with these criteria would provide for reasonable information to allow decision makers to conclude that the impact can be mitigated to a less-than-significant level. In addition, through the subdivision approval process, the applicant is required to coordinate with the school districts to ensure that appropriate performance standards are achieved in addition to financing.

The significant environmental impacts of project-proposed school improvements have been analyzed in the Draft EIR. The method for funding these schools would be allowed once development on the project site is approved. The funding aspect (as it will be set forth in the *School Financing and Cost Distribution Plan*) would not create any additional environmental impacts.

- 85.78 Please refer to the response to Comment 28.03.

- 85.79 Pages IV.F--87 through --89 present information on child care provided by the Contra Costa Child Care Council. The Draft EIR accurately described the supply of child care and provides an adequate basis from which to discuss project impacts and mitigation measures.
- 85.80 *Mitigation PF-24* on page IV.F--93 of the Draft EIR requires that the County verify that the project child care mitigation plan would meet the requirements of the Child Care Facilities Ordinance and would provide for adequate child care facilities for each phase of the project. The degree of specificity in this mitigation is adequate under CEQA.
- 85.81 It would be speculative to make assumptions regarding landfill capacity after 2026. The Draft EIR adequately discusses landfill capacity impacts.
- 85.82 The Draft EIR and the commenter agree that the proposed project would adversely impact habitat for many wildlife species, and that a number of special status species would be harmed, both by direct injury to individuals and loss of habitat. The Draft EIR (pages IV.G--28 and 38) quantifies natural and man-made habitats that would be altered or destroyed by the project. It identifies known special status species habitat that would be altered or destroyed (pages IV.G--31, 43, 45-47, 48, 51, etc.). The Draft EIR describes impacts in sufficient detail to determine which impacts meet the CEQA-defined criteria for significance.

The Contra Costa County General Plan requires the preservation or protection of various biological resources (i.e., wetlands, special status species, water quality in local creeks, existing vegetation in open space areas sufficient to maintain a healthy balance of wildlife populations, etc.). Mitigation measures recommended by the EIR, and required by state and federal agencies administering the Clean Water Act and state and federal endangered species acts, are expected to mitigate impacts to less-than-significant levels. Biotic resources would be preserved, protected and enhanced to offset project impacts. (Please refer also to the response to Comment 74.02.)

The Cowell Ranch project would not be in violation of state and federal laws designed to protect wildlife and their habitat. The Draft EIR (pages IV.G--42, 51 and 55) clearly commits the applicant to compliance with state and federal laws regulating wetlands and endangered species.

Mitigation measures required by the Draft EIR commit to a clear course of action that, if implemented, would reduce project impacts on biological resources to less-than-significant levels. In many cases, the course of action required is the preparation and implementation of various mitigation plans. Each plan is to include all provisions stipulated in the Draft EIR. Each will be reviewed and approved by the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the California Department of Fish and Game. The final mitigation plan must also incorporate the many permit requirements of state and federal agencies regulating projects that affect wetlands

and endangered species. The lead agency (in this case, Contra Costa County) will ensure that the final mitigation plan is prepared and implemented per the provisions of AB 3180 and CEQA Section 21081.6.

85.83 At present the Cowell Ranch is managed for cattle. Range management practices that suppress ground squirrel populations, favor the establishment of noxious weeds, and eliminate native vegetation do not maximize habitat values for kit fox, tiger salamanders, raptors, and other species. The Draft EIR requires that the applicant manage the open space preserve for wildlife. This must be accomplished through the implementation of a Habitat Management Plan that has the following components (among others) (see *Mitigation BR-1* and *Mitigation BR-8*):

- grazing program that manages annual grasses on the ranch to favor other wildlife species (elements of this program include exclusionary fencing where appropriate, seasonal grazing at appropriate times of year, the maintenance of an optimum amount of residual plant material, etc.);
- range improvements which enhance the wildlife values of adjoining habitats;
- weed control to ensure that non-native annual grasses and native vegetation are not replaced with noxious weeds; like star-thistle, Italian thistle, bull thistle, etc.
- termination or reduction in the use of rodenticides in order to encourage ground squirrel populations;
- monitoring and control of red fox and coyote populations.
- measurable performance standards, detailed monitoring protocols and contingency measures if performance standards are not met;

Mitigation measures included in the draft Habitat Management Plan have been incorporated into the Draft EIR. The Draft EIR also requires some additional mitigation measures, such as applicant preparation of detailed plans (see response to Comment 85.82). The detailed habitat management plan must reflect changes in the proposed project as the applicant, in compliance with other mitigation measures, modifies the project in order to avoid sensitive habitats. The detailed habitat management plan must also reflect requirements of state and federal agencies responsible for wetlands and endangered species protection. Range management options that could not feasibly be investigated by the EIR consultant can be investigated and possibly incorporated into the final HMP; examples include the use of fire to manage annual grasslands, and biological controls for noxious weeds. It is desirable to have some flexibility in the preparation and implementation of final mitigation plans, so long as the provisions required by the Draft EIR are incorporated. State and federal regulatory agencies and the lead agency (Contra Costa County) will ensure that a plan is formulated and implemented that meets both the requirements of the EIR and state and federal law. Implementation of the plan is expected to substantially improve habitat quality of the project site's annual grassland such that the grassland losses associated with the project are reduced to a less-than-significant

level. The plan must also contain provisions for monitoring and reporting that will allow the regulatory agencies and the applicant to adjust the plan to further enhance wildlife values.

- 85.84 The Draft EIR assesses the existing wetlands of the project site in sufficient detail to quantify significant impacts and develop the criteria by which wetland mitigation plans, once implemented, would reduce impacts to less-than-significant levels. Jurisdictional waters (wetlands) were delineated by Zentner and Zentner (under contract to the applicant) in 1993 (see page IV.G--37 of the DEIR). This delineation was verified by the U.S. Army Corps of Engineers (USACE) on April 5, 1994. Additional wetlands were delineated on a small portion of the project site north of Briones Valley Road in 1994. USACE verified this delineation on June 2, 1994. Wetlands of the site are shown in Figure 54 of the Draft EIR. Some of these wetlands are wet grassy swales that function ecologically like other non-native grasslands of the site, and were described in the setting section under "Non-native Grasslands". These wetlands were nonetheless listed as jurisdictional waters on page IV.G--38 of the Draft EIR. The Draft EIR explicitly describes the project's impacts to wetlands of the project site based on the USACE-verified wetland delineation.

As noted in the Draft EIR (page IV.G--37), some areas identified by Zentner and Zentner as "wet meadow" appear to be inundated during portions of the winter and spring. Such areas also support some plants common to vernal pools. The Draft EIR recommends additional surveys in areas identified by Zentner and Zentner as wet meadows to clarify the relative amounts of vernal pool and wet meadow habitat. If the surveys were to indicate that some of the wet meadow was in reality vernal pool habitat, the conclusions of the EIR would not change; impacts on wetlands would remain significant, and mitigation would still be required as described in the Draft EIR. As indicated in the discussion of *Mitigation BR-4* (Draft EIR, pages IV.G--39 through IV.G--40), more mitigation would be required for vernal pools (2:1 replacement ratio) than for wet meadows (1:1 replacement ratio), assuming that the project could not be redesigned to avoid their loss.

At the time the Draft EIR was written, 28.5 acres of wetlands of the types shown in Table 58 (page IV.G--38) were to be converted to developed habitats. During the winter of 1996-97, additional surveys were conducted on the project site (primarily to map the distribution of vernal pool fairy shrimp on the site) and portions of the project in Planning Area 31 and 32 were redesigned in order to reduce wetland impacts (Huffman and Associates, 1997) (see Comment 84.01). Table A shows revised wetland acreages that reflect these additional surveys and proposed project revisions.

Last winter's surveys did not clarify the relative amounts of wet meadow and vernal pool habitats in the Briones Valley. Based on the proposed project redesign, however, the questionable areas lie entirely within the proposed open space preserve. Furthermore, the surveys indicate that no wet meadow habitat to be developed is occupied by vernal pool fairy shrimp. The survey work is sufficient to adequately

assess impacts and mitigations for both wetlands and vernal pool fairy shrimp. Nevertheless, another year of wet season sampling will be completed prior to issuance of a Section 10a permit from the USFWS.

The Draft EIR provides clear direction for the development of a detailed wetland mitigation plan. It specifies when provisions of the plan are to be implemented, and provides the criteria for the location of replacement wetlands. It requires that no wetlands be created such that existing wetlands or their flora and fauna would be adversely affected, and requires that performance standards be developed and contingency measures drafted. It is the responsibility of the lead agency (in this case, Contra Costa County) to ensure that these measures are implemented in accordance with the provisions of AB 3180 and CEQA Section 21081.6.

- 85.85 The Draft EIR requires the applicant to comply with Section 404 of the Clean Water Act. The U.S. Army Corps of Engineers will determine if the project is in compliance with federal policy. The regulatory branch of the U.S. Army Corps of Engineers (USACE), after a review of the permit application package submitted by the applicant, is in a position to make this determination.

The Draft EIR has quantified wetland impacts and required mitigation for purposes of CEQA. The applicant's consultant is now preparing a wetland mitigation plan consistent with the requirements of the EIR and the "Memorandum of Agreement Between Environmental Protection Agency and the Department of the Army Concerning the Determination of Mitigation Under the Clean Water Act Section 404(b)(1) Guidelines" (Huffman and Associates, June 2, 1997). This plan, along with an alternatives analysis, will be submitted to the USACE. The final wetland mitigation plan, if in conformance with EIR-recommended mitigations and the requirements of the USACE, U.S. Fish and Wildlife Service, and California Department of Fish and Game, will mitigate wetland impacts to less-than-significant levels. The requirements of CEQA will thereby be met. If, in the judgment of the USACE, there will be a net loss of wetland function and value, the mitigation plan notwithstanding, then the applicant will be required to adjust the project plan, the mitigation plan, or both until the USACE is satisfied. It is not possible for this EIR to anticipate the final outcome of the federal permit process.

- 85.86 Artificially created vernal pools have been successful in providing habitat for the threatened vernal pool fairy shrimp. Existing conditions on the project site provide a good example of this. Vernal pool fairy shrimp were found by both LSA Associates and Entomological Consulting Services in small man-made seasonal pools north of Marsh Creek and west of Marsh Creek Road. Zentner and Zentner concluded that these pools were created when pipeline excavation and grading at some time in the past left topographic depressions that fill with rainwater in the winter. Vernal pool fairy shrimp were also found in two depressions formed by heavy cattle use around a water trough. During the winter of 1996-97, vernal pool fairy shrimp were found in very small rain-filled tire ruts in a road traversing portions of the Briones Valley. This

Table A
PROJECT IMPACTS ON JURISDICTIONAL WATERS (WETLANDS) BASED ON
PROPOSED PROJECT REVISIONS

<u>Habitat Type</u>	<u>Existing Area (in acres)</u>	<u>Area to be Developed</u>	<u>Percent Of Total</u>
Wet Meadow	68.5	0.8	1.2
Alkali Scrub	29.6	0.0	0.0
Riparian Forest	23.9	0.0	0.0
Seasonal Tributaries	19.8	2.2	1.1
Stock Ponds	15.7	4.2	2.7
Mud Flats/Sand Bar	7.9	0.0	0.0
Seasonal Freshwater Marsh	3.1	1.2	38.7
Northern Claypan Vernal Pool	0.4	0.2	50.0
Seep	0.4	0.0	0.0
Total	169.3	8.6	5.1

SOURCE: Huffman and Associates, 1997.

species has been observed in other man-made habitats of the Central Valley, including swimming pools and irrigation ditches partially filled with stagnant water. Artificial pools created at the Byron Airport have supported shrimp populations for the past five years (Dr. Richard Arnold, personal communication).

The U.S. Fish and Wildlife Service (USFWS) does indeed support the creation of vernal pools as a mitigation measure (see the USFWS *Programmatic Consultation Guidelines*). It does not support creation as the *primary* measure. In addition to the requirement that existing habitat be preserved at a 2:1 ratio, the USFWS requires that replacement habitat be created at a 1:1 ratio.

Entomological Consulting Services conducted wet season surveys on the project site for four species of federally listed freshwater shrimp during the winter of 1996-97. These surveys were conducted according to USFWS protocol pursuant to Fish and Wildlife Service permit PRT-797233. Long-horn fairy shrimp (*Branchinecta longiantennae*), a federally endangered species occurring regionally, was not found on the site. Vernal pool fairy shrimp (*Branchinecta lynchi*), a federally threatened species, was found in 25 wetland pools of the site. These pools were located in wetland complexes totaling approximately 2.6 acres of the site. Most of these wetland complexes are located in the Briones Valley and would be unaffected by the project. Thirteen pools that together occupy approximately 0.3 acres of the site would be eliminated by project development. An additional wet season survey will be conducted during the winter of 1997-98. If this subsequent survey confirms these findings, then the applicant would be required to preserve 0.6 acre of existing habitat (per current USFWS requirements) and create 0.6 acre of seasonal pools (per the mitigations of the EIR). If the provisions for the wetland mitigation plan required by the Draft EIR are all met by the applicant, impacts on vernal pool fairy shrimp would be reduced to less-than-significant levels.

- 85.87 Comment noted. Please refer to the response to Comment 85.82 among others.
- 85.88 Comment noted. The Draft EIR identifies the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) as responsible agencies, and states that the project must comply with provisions of the state and federal endangered species acts. The Draft EIR has concluded that project impacts on several special status animals would be significant. Mitigation measures are recommended that, if fully implemented, would reduce impacts to less-than-significant levels. As noted in the Draft EIR, the USFWS and the CDFG may require measures in addition to those recommended in the Draft EIR. Impacts and mitigation measures were evaluated in the context of the EIR consultant's knowledge of, and experience with, USFWS and CDFG permitting requirements. These agencies provided the applicant with preliminary guidance at a pre-application meeting in December 1996.
- 85.89 Neither the San Joaquin kit fox, nor evidence of it, has been documented on the project site. It is presently unknown whether the kit fox uses the project site for either

home range or dispersal movements. Thus, the assumptions stated by the commenter (that the project site is important habitat for San Joaquin kit fox, that the proposed project would restrict the migratory movement of this species, that open space adjoining the project that now serves as kit fox habitat would be degraded; etc.) cannot be stated as fact at this time. In the absence of survey data, the Draft EIR makes an assumption that the site is used by kit fox, even though definitive evidence of such use is presently lacking. The document also recognizes that if the site is used by kit fox, the proposed project would result in impacts (of several types) to this species that meet the CEQA-defined criteria of significance. As a result, there is no impact identified by the commenter as significant that has not also been considered significant by the Draft EIR.

With respect to mitigation, the commenter is referred to the response to Comment 85.83. In the opinion of the EIR biological consultant, the preservation and management of 2,700 onsite acres of open space, and up to 768 additional acres offsite, would mitigate habitat losses to a less-than-significant level. It is important to note that the preservation and enhancement of existing kit fox habitat is an important component of U.S. Fish and Wildlife Service (USFWS) mitigation policy. Even if the USFWS eventually requires somewhat more compensatory mitigation, the principle would be the same: there would be a permanent loss of potential kit fox habitat that is offset by the preservation and management of existing habitat (usually at a ratio of 3:1).

The USFWS may require more compensatory mitigation habitat than the applicant can provide onsite. If significant project redesign is not considered feasible, the Draft EIR recommends that the balance of compensatory habitat be provided offsite. If the applicant is to provide offsite mitigation, it is the responsibility of the lead agency to ensure that suitable habitat is acquired and managed in accordance with the recommendations of the EIR. The Draft EIR also acknowledges that the amount of compensatory habitat eventually required could be more than is identified in the EIR, depending on the requirements of the U.S. Fish and Wildlife Service and the California Department of Fish and Game. These agencies will play a key role in determining the amount of onsite versus offsite mitigation.

- 85.90 The *Round Valley Regional Preserve Land Evaluation for Interim Use* prepared by the East Bay Regional Park District in consultation with the U.S. Fish and Wildlife Service (USFWS) is a planning document for the Round Valley Regional Preserve. Facilities planned for the preserve include a 40-car graveled parking lot, picnic area, temporary rest rooms, and hiking, biking and equestrian trails. Unlike the project site, the Round Valley Regional Preserve has a documented kit fox population. It appears that the USFWS, which has ultimate permit authority over projects potentially affecting the San Joaquin kit fox, was convinced that the construction of limited recreational facilities in Round Valley was compatible with the conservation of this species, since the EBRPD prepared the *Round Valley Regional Preserve Land Evaluation* in consultation with USFWS. It is thus possible that a similar level of human activity in onsite designated

open space areas would be acceptable to USFWS. The final habitat management plan for Cowell Ranch's open space preserve will be drafted in consultation with the USFWS. Project approval will be conditional on the USFWS approving the plan.

With respect to the issue of dogs entering the open space preserve, and their possible effect on the San Joaquin kit fox, please refer to the response to Comment 43.13. With respect to possible traffic mortality, please refer to the response to Comment 1.12.

85.91 Please refer to the response to Comment 85.86.

85.92 The locations of replacement breeding ponds for the California tiger salamander have been identified in the draft HMP. Based on the locations shown in this document, these ponds would be well-distributed throughout the open space preserve, surrounded by potential aestivation habitat. In earlier studies, H.T. Harvey and Associates identified most of the Briones Valley and surrounding lands as suitable aestivation habitat.

Although the project would result in a net loss of aestivation habitat, the aestivation habitat within the open space preserve would be enhanced by a range management program (see *Mitigation BR-1*) that would promote increased ground squirrel populations in the area. As indicated in the Draft EIR, tiger salamanders depend, in large part, on rodent burrows for aestivation habitat, although other types of cover, including logs and boards, are known to be used.

The mitigations recommended in the EIR would provide for replacement of breeding habitat at a 1:1 ratio and enhancement of aestivation habitat for the California tiger salamander. These measures would, in the opinion of the EIR consultant, reduce impacts to less-than-significant levels.

Please refer also to the responses to Comments 43.32, 51.10 and 59.09.

85.93 The conclusions in the Land Use section of the Draft EIR pertain to the project as proposed, with no further mining of the Domingue Sandstone deposit. The recommendation in the Mineral Resource section that the resource be fully mined prior to urban development is accompanied by a discussion of mine closure and reclamation techniques to avoid associated impacts and mitigation needs, including needs pertaining to land use compatibility--*MR-2*; visual, soils and geology, hydrology, vegetation and wildlife, air quality (dust control) and noise--*MR-1*.

In response to this comment, the language for impact and mitigation *MR-2* has expanded to clarify the need for mine operation CEQA compliance to ensure against secondary environmental impacts, including the cumulative impact concerns mentioned in this comment (see section IV Errata for page IV.H--6). This additional

(or updated) text has been included for information only. It does not alter the meaning or conclusions presented in the Draft EIR.

Please refer to *Impact BR-12* and *Mitigation BR-12* (Draft EIR pages IV.G--56 through IV.G--58), which address this project impact and recommend specific measures for the protection of breeding raptors.

- 85.94 Please refer to *Impact BR-12* and *Mitigation BR-12* (Draft EIR pages IV.G--56 through IV.G--58). Please also refer to *Mitigations BR-1* and *BR-8*, which are designed to increase California ground squirrel populations within the open space preserve. A detailed relocation plan is not warranted until it is known whether burrowing owls are located in future construction zones. It is sufficient to require the applicant to comply with mitigation measures of the Draft EIR and with the *Staff Report on Burrowing Owl Mitigation* (CDFG, 1995). Past surveys identified only one burrow on the project site that was used by burrowing owls. This burrow was located in the project-proposed open space area.
- 85.95 The Draft EIR identifies significant biological resources impacts and recommends mitigation measures to reduce impacts to less-than-significant levels. With mitigation, the project could be judged to comply with the Contra Costa County General Plan policies cited by this comment. Please refer to the response to Comments 74.02 and 85.82.
- 85.96 The proposed project does not include an application for a sand mining operation. If an application is filed, the proposed operations will undergo environmental review. Since an application has not been filed, it is not possible to determine if environmental impacts may result from the operations. However, this EIR (including the following response) identifies how mining might occur, what potential environmental impacts may result, and what mitigation measures might be applied. Consistent with the Master EIR approach, the determination of environmental impact and mitigation measures will be made at the time a specific application is brought forward and is subject to a project level environmental review.

Before any onsite mining could occur, the applicant would be required to prepare a *Mine Closure and Reclamation Plan* as recommended in *Mitigation MR-1*. This plan would include adequate measures to mitigate any environmental impacts of onsite mining. The mining of the area is not expected to create significant public safety or health impacts. There is no existing development around the site, and new development (if approved) in this area would be phased, as recommended in *Mitigation MR-1*, to assure that no public health issues arise.

The mining operations likely to occur on the site would include an open pit using conventional excavation and earth-moving equipment. The mining operations would stabilize the existing quarry area while generating sand resources for sale. The mine would have typical slopes of between 2:1 and 4:1 with maximum excavation depths

around 90 feet. The mine could be developed in phases. Once a phase is complete, it would be immediately reclaimed and revegetated. Mining of this quarry is likely to occur by shallow excavation. The material could be placed in small stock piles within the active mined area and could be loaded directly from the stock pile into trucks. The average water demand would be approximately 30,000 gallons per day. All overburden materials removed during the operation would be sold or reused during site reclamation and thereby, resulting in no waste.

In order to ensure impacts regarding truck traffic, dust and air pollution, noise and other impacts are addressed, it is recommended that the following criteria be considered for inclusion in the *Mine Closure and Reclamation Plan*:

1. Access: Primary access to and from the quarry site is likely to be by way of a north-south graveled road extending between Marsh Creek Road and the north end of the adjacent ridge. This access road intersects Marsh Creek Road approximately 4,400 feet west of Walnut Boulevard. Prior to each rainy season, this access road could be overlain with gravel. Roadway signs per Caltrans standards could be installed to indicate trucks entering, exiting highway for both eastbound and westbound lanes of Marsh Creek Road near the intersection to the access road.
2. Noise: The primary mechanical activities at the site are expected to include operation of front-end loaders, dozers and excavators. To mitigate noise impacts, this equipment should include mufflers. Excavations should be done by truck and rubber tire mounted excavation equipment. Limiting or prohibiting the use of explosives should be considered.
3. Dust and Air Pollution: Dust could be controlled by sprinkler systems placed on the windward side of the quarry area to control dust in the active mine area. Sprinklers could also be installed along the side of the access road. An erosion control plan should be prepared. The erosion control plan could consist of three major parts: (1) the use of moderately flat slopes to limit gradients and encourage plant growth, (2) the placement of a settling basin at the mouth of the valleys created by mining to permit silts to settle out prior to discharge of runoff into adjacent creeks or irrigation return ditches, and (3) the reclamation and revegetation of slopes prior to the winter season once mining activities in a particular area are complete. Mining operations should conform to the regulations of the Bay Area Air Quality Management District (BAAQMD) and the County Health Department. In order to protect air quality, the following should be incorporated into the Plan: (1) revegetate disturbed areas, (2) dust-proof access roads and all hauling operations by watering the access routes and other quarry-affected areas so as to avoid dust impacts on surrounding properties, and (3) provide shake-down berms or bumps to shake loose and drop sand from hauling trucks before they reach the public roads. Please refer also to the response to Comment 85.104.

4. Visual Considerations: Fencing or screening may be required around the mining area. The sand resource forms a north northwest-trending ridgeline. The sand to be mined is along the access of the ridge and as a result the mining activity would be mostly hidden by the existing ridge slopes to the east and west.

5. Biological Resources: The mining impact zone should be clearly identified, an inventory of affected blue oaks made, and mitigation for blue oak losses provided in accordance with *Mitigation BR-2*. Since the area may contain potential kit fox denning sites, the provisions of *Mitigation BR-8* for construction-related mortality and disturbance should be implemented. Since burrowing owls and tree-nesting raptors may nest in the mining area, all measures in *Mitigation BR-12* would also apply.

- 85.97 The state has not analyzed the site to make a determination regarding whether the sand is of statewide significance.
- 85.98 Please refer to the response to comment 85.96.
- 85.99 Please refer to the response to Comment 63.05. The mitigation measures relating to cultural resources include very specific criteria to mitigate impacts to a less-than-significant level. Specifically, the mitigation programs must adhere to the strict limitations and criteria specified in Appendix K of the State CEQA Guidelines. A copy of Appendix K has been added as Appendix G of this EIR (see section IV, Revisions to the Draft EIR (Errata)). In sum, Appendix K requires the avoidance of damaging effects on archeological resources wherever feasible. If avoidance is not feasible, then the importance of the site must be evaluated using very specific criteria outlined in Appendix K. If avoidance is not feasible, then an excavation plan for mitigating the effect must be prepared. Very specific criteria for the excavation plan are also included in Appendix K. In addition, Appendix K includes very clear rules regarding mitigation of significant affects on important agricultural resources. The mitigation plans must adhere to Appendix K and the information contained therein is sufficient to determine that the impacts can be mitigated to a less-than-significant level.
- 85.100 According to the EIR archaeologist, a representative from the Native American Heritage Commission was consulted regarding human remains discovered during the archeological survey, pursuant to Public Resources Code Section 5097.94.
- 85.101 Section IV.I of the Draft EIR adequately describes the cultural resource impacts of the proposed project. Please also refer to the response to comment 63.05.
- 85.102 Please refer to the response to Comment 63.05. The mitigation measures relating to cultural resources include very specific criteria to mitigate impacts to a less than significant level. Specifically, the mitigation programs must adhere to the strict limitations and criteria specified in Appendix K of the State CEQA Guidelines. A copy of Appendix K has been added as Appendix G of this EIR (see section IV, Revisions

to the Draft EIR (Errata)). In sum, Appendix K requires the avoidance of damaging effects on archeological resources wherever feasible. If avoidance is not feasible, then the importance of the site must be evaluated using very specific criteria outlined in Appendix K. If avoidance is not feasible, then an excavation plan for mitigating the effect must be prepared. Very specific criteria for the excavation plan are also included in Appendix K. In addition, Appendix K includes very clear rules regarding mitigation of significant affects on important agricultural resources. The mitigation plans must adhere to Appendix K and the information contained therein is sufficient to determine that the impacts can be mitigated to a less-than-significant level.

85.103 Please refer to the response to comment 85.100.

85.104 Any sand mining that would occur on site would be subject to the rules and regulations of the Bay Area Air Quality Management District which would require new source review, and, if emissions exceed certain thresholds, application of Best Available Control Technology. District regulations also require air toxics new source review for any sources of listed materials. This list of pollutants that trigger health risk screening requirements does not include crystalline silica.

85.105 Comment noted. In response to this comment, the following measure has been added to *Mitigation AQ-1*:

Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.

The project will be subject to certain measures required by law, such as applicable California Vehicle Code provisions; these measures are not appropriate to be listed as mitigations measures for the project.

Monitoring of PM-10 concentrations provides no reduction in emissions. Such monitoring might be useful for projects where construction would occur directly upwind of a sensitive receptor such as a hospital or convalescent home, but does not appear to offer any benefits for the proposed project.

A measure that would require pavement of construction access roads would be redundant with the second measure listed under *Mitigation AQ-1* (see page IV.K--10 of the Draft EIR).

85.106 The non-attainment designation for carbon monoxide refers to the "urbanized area" of the Bay Area, which does not include the project site. In fact, no violations of the carbon monoxide have been measured within any part of the San Francisco Bay Air Basin since 1991, and, as noted in the Draft EIR, a redesignation request has been submitted to the U. S. Environmental Protection Agency.

Current air quality on the site is characterized by data contained in Table 63 of the Draft EIR. These data show no violations of the carbon monoxide standard for a three-year period at the three closest air quality monitoring sites.

The determination of significance of carbon monoxide impacts is based on Criterion #2 listed on page IV.K--8 of the Draft EIR: violation of the 1-hour or 8-hour ambient air quality standards. Based on this criterion, long-term local carbon monoxide effects were judged to be less-than-significant (see page IV.K--14 of the Draft EIR).

All intersections analyzed were projected to operate at Level of Service (LOS) D or worse with the proposed project, and represented worst-case conditions of traffic volumes and congestion.

- 85.107 Please refer to the response to Comment 74.36 regarding inconsistencies with the General Plan. Please refer to the responses to Comments 55.04, 74.37 and 85.104 regarding quarry emissions.

The PG&E Gas Terminal and Compressor Station is not included in the BAAQMD's inventory of sources of Toxic Air Contaminants (BAAQMD, 1995 Toxic Air Contaminant Report, Volume II, March 1997). This means either that the facility is not a source of toxic air contaminant emissions, or that quantified emissions are below the thresholds that require inclusion in the inventory. Since the thresholds for inclusion in the inventory are based on health risk, the BAAQMD has determined that any health risks resulting from the emissions from the facility result in a de minimis level of health risk.

Regarding odor impacts of the PG&E station on proposed uses, please refer to the response to Comment 65.04.

- 85.108 Under the BAAQMD guidelines, Section 15125(b) of the State CEQA Guidelines is applicable to General Plans of cities and counties. BAAQMD CEQA Guidelines provide separate significance thresholds for projects and for General Plans. Consistency with the BAAQMD Clean Air Plan population and Vehicle Miles Traveled (VMT) assumptions and consistency with the Clean Air Plan transportation control measures are thresholds of significance for plans, rather than projects such as the Cowell Ranch project.

- 85.109 Please refer to the response to Comments 39.23 and 74.34.

- 85.110 BAAQMD CEQA Guidelines do not require quantification of direct emissions from residential uses, as residential emissions from vehicles are at least an order-of-magnitude greater. It is known that these direct emissions would add slightly to project emissions shown in Table 64, but that inclusion of these emissions would not alter the conclusion that project impacts would be significant and unavoidable. Under BAAQMD CEQA Guidelines, an identification of feasible mitigation measures is

required and an analysis of mitigation measure's effectiveness should be quantified "to the extent feasible." The mitigations for direct impacts (e.g., restrictions on the number and/or type of fireplaces in residences, provisions to use of natural gas and electric appliances--see *Mitigation AQ-2*) are considered feasible but no information exists on their effectiveness. Incomplete information on the effectiveness of mitigation measures would be problematic only in the situation where project impacts could conceivably be reduced to a level of non-significance, which is not true for the proposed project.

85.111 Comment acknowledged. In response to this comment, the second paragraph on page IV.K--13 of the Draft EIR regarding traffic and related air quality impacts on Livermore Valley, has been removed. This revision would not alter the Draft EIR's conclusion regarding the project's significant, unavoidable effects on regional air quality (*Impact AQ-2*). Please refer to the response to Comment 52.10 for a discussion of how traffic can decrease on a roadway as a result of the Cowell Ranch project.

The impact of adding project traffic on Vasco Road is lessened by other trips finding other paths to reach locations in Tri-Valley and the South Bay. Thus, the net effect is a relatively low increase on Vasco Road. Such diversion is commonly observed in travel demand modeling.

In the Draft EIR traffic analysis, Vasco Road is divided into two segments: (1) Vasco Road immediately south of Camino Diablo, and (2) Vasco Road immediately north of I-580. The traffic model assumes that traffic-generating land uses will exist along Vasco Road between Camino Diablo and I-580. This explains the difference in the traffic levels on these two roadway segments under the "With Project" scenario.

85.112 Please refer to the response to Comment 85.111.

85.113 Please refer to the responses to Comments 2.32, 46.01, and 47.05 for discussion of onsite job projections, and to the responses to Comments 46.02 and 47.02 regarding the onsite jobs/housing balance. The mitigation measures described as having been incorporated into the project are strategies identified as feasible by BAAQMD CEQA Guidelines. Prediction of the effectiveness is difficult, and thus a modest range of effectiveness of 10 to 20 percent is cited in the Draft EIR (page IV.K--14). The Draft EIR makes it clear that reductions of this magnitude would not bring project and cumulative regional air quality impacts at all close to a level below the BAAQMD thresholds of significance, and the impact on regional air quality is therefore identified as significant and unavoidable.

85.114 Please refer to the response to Comment 85.142. *Impact AQ-2* on page IV.K--11 of the Draft EIR, identifies a significant project and cumulative impact on regional air quality. This finding is based on the BAAQMD's threshold of significance for cumulative impacts, which states that any project that would have a significant impact

individually would also have a significant cumulative impact. Calculation of cumulative emissions is not necessary, based on this BAAQMD guideline.

With respect to local air quality, the DEIR contains forecasts of worst-case carbon monoxide concentrations under cumulative traffic conditions with and without the project. Project impacts on this pollutant were deemed less-than-significant. Carbon monoxide is a pollutant of concern at the local level; other pollutants are addressed in the regional air quality analysis.

Regarding information on existing county-wide emissions, the Chiron EIR cited by this comment was published using old BAAQMD guidelines which contained a significance threshold based on county-wide emissions. The current guidelines were published in April 1996, after the Chiron EIR was published. The current BAAQMD guidance document no longer recommends that significance threshold, nor does it suggest that county-wide emissions are relevant to either the setting or impact section of environmental documents.

- 85.115 A worst-case analysis of local air quality effects due to project traffic was included in the Draft EIR. The projected pollutant concentrations did not exceed the state/federal ambient air quality standards near major intersections (considered "hot spots" for pollutants). Concentrations at other locations along roadways would be less than at these "hotspot" locations, and would also be below state and federal standards. Project impacts on local carbon monoxide conditions would therefore be less-than-significant, as discussed on pages IV.K--14 through IV.K--16 of the Draft EIR. *Impact LU-16* on page IV.A--66 of the Draft EIR identifies general potential conflicts between residential uses and adjacent roadways, including visual, noise, and air quality problems. This statement is not necessarily inconsistent with the air quality section findings, since air emissions and other impacts from adjacent roadways may still represent a nuisance for adjacent residents.
- 85.116 Sewer mains and pump stations would certainly have a potential to create odors, but a properly designed and maintained sewer system would not create an odor problem except under exceptional conditions. No mitigation measures are required beyond those recommended in *Mitigation LU-8*.
- 85.117 The prohibition of noise-sensitive land uses in areas that, without mitigation, would be considered unsuitable for the proposed land use is one method to limit the impact. It is likely, however, that through site planning at each potentially affected parcel, and specific mitigation measures such as noise barriers, setbacks, and sound-insulated buildings, compatible residential development can occur. Please note that CEQA Guidelines section 15092(c) prohibits the lead agency from reducing the proposed number of housing units as a mitigation measure if it determines that there is another feasible mitigation measure that would provide a comparable level of mitigation.

85.118 *Impact N-12* and accompanying *Mitigation N-12* address potential noise impacts from the existing Sand Hill Ranch Motorcross Park (see Draft EIR, page IV.L--34). The discussion notes the possibility that residential development in Planning Areas 58 and 59 (and potentially other nearby planning areas) would be exposed to noise from the motorcross park. This conclusion is based in part on County records of prior complaints from existing residents in the area (see Draft EIR, page IV.L--34). The September 13, 1996 County staff memorandum from Anna Bhat, Current Planning, to Jim Cutler, Advanced Planning alludes to this potential problem, as noted by the commenter.

Please refer to the response to Comment 63.05 for discussion of the conceptual overview of project impacts provided by this Master EIR. At this stage, County complaint records, combined with consultant experience with similar land uses, provides sufficient basis for the Draft EIR's conclusions regarding the nature and extent of the potential noise problem. Additional analysis of noise levels from the motorcross park would not be likely to alter the Master EIR's conclusions regarding this potentially significant impact or provide substantially more direction for *Mitigation N-12*, since the applicant has not yet proposed a specific development configuration (site and lot layouts, building orientations, etc.) for Planning Areas 58 and 59 or other potentially affected planning areas. Please note that setback buffers are one of various mitigation options discussed in *Mitigation N-12*. This mitigation measure establishes a specific performance standard (i.e., compliance with the City of Brentwood's standard for industrial-related noise) for judging the effectiveness of mitigation measures.

85.119 Comment noted. In response to this comment, the statement on page IV.L--12 of the Draft EIR has been corrected to state that "the County is planning an expansion of the airport to accommodate up to 250 aircraft based on the premises, and up to 210,000 aircraft operations annually" (emphasis added) (see Section III, Revisions to the Draft EIR (Errata)). This information was current at the time that the Draft EIR was prepared. *Impact N-8* indicates that the effect of aircraft noise on project residents and school children within the 85 dB (SEL) noise contour would represent a potentially significant impact, as suggested by the commenter. The requirement for acoustical studies recommended by *Mitigation N-8* is consistent with Title 24, Part 2 of the California Code of Regulations as well as local regulations, and is therefore adequate to mitigate this noise impact. Because the aircraft overflights would not represent a constant noise source, site plan redesign does not appear to represent a reasonable mitigation measure.

85.120 No significant light/glare impact on the project from the motorcross park is anticipated, given the distance and intervening topography between the closest East Village development area, the location of the motorcross park southwest of the Camino Diablo/Walnut Boulevard intersection, and the intermittent nature of associated motorcross events. The existing motorcross park generates traffic periodically, and typically not on a weekday during peak hours. Thus, motorcross traffic combined with

project-related traffic, would not be expected to contribute to substantial congestion on surrounding roadways.

- 85.121 Pages IV.M-11 and -12 adequately describe the potential impacts and mitigation measures related to PG&E's natural gas compression facility.
- 85.122 This comment asks about the reference to removal of sediments from Marsh Creek Reservoir. Grading and sediment removal in Marsh Creek Reservoir would occur in connection with the breaching of the levee for improved flood control (see discussion on page IV.E--17 of the Draft EIR). Also, removal of sediment from the reservoir may be needed following project construction as specified in connection with *Mitigation D-7* (see pages IV.E--29 and 30 of the Draft EIR, "Reservoir Sedimentation Analyses).
- 85.123 This comment raises questions about the mitigation measures for restricting public access to Marsh Creek Reservoir. Regarding the question of when the fencing of the reservoir would take place, *Mitigation PHS-4* has been amended to read: "Prior to initiating construction of the first development phase of the project, ...".

As stated in *Mitigation PHS-4*, public access to the reservoir should be restricted until the upstream mercury contamination source is cleaned up and the concentration in the reservoir sediments are less than 0.5 ppm. For the EIR authors (or anyone else) to suggest how long this will take would overly be speculative.

The suggestion to require that the fence be designed to "prevent" public access is inappropriate. The mitigation as written (to "discourage" public access) is realistic and appropriate.

- 85.124 This comment points out the need for mitigation to address the potential impacts to residents and employees from the use of pesticides on the common landscaped areas and agricultural areas of the project. The concern expressed in this comment is already addressed by the third item under *Mitigation PHS-6* which requires that personnel engaged in the application of herbicides and pesticides follow manufacturer's directions as well as local, state and federal regulations regarding their use, storage and disposal. Such guidelines and regulations have been developed to protect the health and safety of those who may come in contact with these chemicals. Following the recommended practices and regulations will reduce pesticide exposure to a less-than-significant level.
- 85.125 This comment questions the mitigations for impacts from hazardous materials handling and storage. The comment mischaracterizes the Draft EIR in stating that the Draft EIR admits that "...governmental regulation does not address these risks" (i.e., risk of accidental spills or unauthorized releases). The commenter is mistaken. Regulations for hazardous materials (and wastes in general) recognize the potential for accidents and unauthorized releases. Such circumstances are addressed through standard facility design and contingency/emergency response procedures.

With respect to the recommendation for maintenance of safety buffers around facilities that handle or store large quantities of hazardous materials, a clarifying statement has been added to *Mitigation PHS-7* specifying that the buffer provisions would be subject to review and approval by the local fire marshal and Contra Costa County Health Services Department at the time of project-specific environmental review and use permit issuance for specific facilities. It is inappropriate and unnecessary to attempt to establish specific buffer zones as part of this EIR; this is a site and project-specific issue.

85.126 Please refer to the response to comment 85.96.

85.127 Please refer to the responses to comment 74.13. and 39.24.

85.128 The cumulative impacts discussion is contained on pages V--5 and V--6 of the Draft EIR. As stated on those pages, the cumulative effects of the project are discussed where applicable in each pertinent environmental topic area in the Draft EIR. The Master EIR includes as much information as possible at this planning phase to address project and cumulative impacts. If it is determined, in the review of a subsequent project, that a project or cumulative impact needs further evaluation, that evaluation will occur as part of additional environmental review as contemplated by the Master EIR approach.

The cumulative impact discussion does not need to provide as much detail provided for the effects resulting from the project alone. While the commenter would like the Draft EIR to take a "list approach" to cumulative impacts, it is appropriate to use a summary of projections contained in a general plan or other planning document (see Public Resources Code section 21100(e)).

85.129 Please see response to comment 85.09, which addresses the relative project impact on cumulative open space losses.

85.130 Anticipated cumulative population and housing impacts are conveyed in the ABAG Projections data listed in Table 8 (Draft EIR page IV.A--4) and associated EIR text. Project relationships to that cumulative population and housing data are described on Draft EIR page IV.A--34.

85.131 As explained on page IV.A--36, the Draft EIR finds that if the project fails to meet the affordability needs of a range of households and income levels, it could be unsuccessful in complying with county and city housing policies regarding adequate housing opportunities. The Draft EIR concludes here that such a deficiency could constitute a significant adverse impact (*LU-3*).

85.132 Project plus anticipated cumulative development impacts on Brentwood and on rural residential areas in the vicinity are addressed under *Impact LU-6* on pages IV.A--45, 46; and under *Impact V--1*, page IV.J--19-20.

Project plus cumulative development impacts on rural residential uses in the area are addressed on Draft EIR pages 44-45..."The project, combined with pending and/or approved development, would alter the existing rural residential character of the south Brentwood vicinity by..."

85.133 See response to comment 185.132.

85.134 See Master Response C, especially item 4.

85.135 The project-related direct loss of prime agricultural soils is quantified on Draft EIR pages IV.B--18. The overall countywide cumulative loss trends are quantified on page IV.B--21. The degree of additional cumulative loss associated with the project in combination with other past county development is described on page IV.B--21 in terms of the numerous other pending and anticipated urban developments in the Brentwood area and subregion (i.e., Brentwood Hills Country Club, etc.). The Draft EIR point and conclusions here regarding cumulative losses is adequately documented; providing additional acreage quantification for each of the listed projects as the commenter suggests would not change the EIR impact and mitigation findings for AG-2.

85.136 The comment calls for essentially a project-level traffic analysis for each of the approved and anticipated projects listed in Tables 9 and 10 of the Draft EIR. The work involved in such an endeavor would be quite extensive and is not required by the guidelines that provided the basis for the traffic impact analysis. The anticipated development listed in Tables 9 and 10 has been incorporated into the traffic model, which generates traffic projections based on this overall cumulative development potential. This level of analysis is consistent with CEQA Guidelines section 15130(b), which states that *"the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as if provided of the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness."*

Please refer to the response to Comment 1.20 for a discussion of the methodology of projecting future year roadway improvements for the future year analysis and the availability of funding for these improvements. As stated on page VI--6 of the Draft EIR, the potentially significant cumulative traffic impacts from the applicable projects identified in Tables 9 and 10 were incorporated into the Travel Model of Eastern Contra Costa County (East County model). This model was used to evaluate transportation impacts of the project, and project-plus-cumulative development.

85.137 The comment questions lack of analysis of cumulative impacts of the project on water demand in the region. Please refer to the response to Comment 85.68. The Draft EIR discussed the project plus cumulative water demand by using the Contra Costa County and Brentwood Water Department projections as shown in Table 38 (projected

water demand within Brentwood's sphere of influence) in Section IV.F.1, Public Facilities, "Water Service."

85.138 As stated on page IV.F--96 of the Draft EIR, the Keller Canyon Landfill will have adequate capacity to serve cumulative development in Contra Costa County over the buildout period of the Cowell Ranch project. The discussion regarding solid waste appears on pages IV.F--93 through IV.F--99. The issues and environmental impacts relating to solid waste for Contra Costa County have been heavily debated and documented over the last several years. As required by state law, Contra Costa County has adopted a Countywide Integrated Waste Management Plan (Co/IWMP) and a Source Reduction and Recycling Element (SRRE). The Co/IWMP establishes the waste management goals, objectives, and policies of the County relating to solid waste disposal facilities siting, and household hazardous waste collection and disposal, and establishes programs designed to implement these goals, objectives and policies. The SRRE sets forth policies and goals relating to source reduction, recycling, composting, special waste, and public information and education, and describes programs designed to help the County achieve these goals and policies. The documents are referenced in the Draft EIR on page IV.F--95. A copy of these documents can be obtained from the Contra Costa County Community Development Department at 651 Pine Street in Martinez.

85.139 This comment represents the opinion of the commenter. The Draft EIR on pages IV.G--59 and IV.G--60 discusses cumulative impacts of the project on biological resources. This discussion is based on review of the cumulative projects identified in Table 10 of the Draft EIR, combined with site reconnaissance of the area that would be affected by these cumulative projects. Please be advised that any future projects requesting discretionary approvals would be subject to environmental review as is this project.

The applicant's request for an *Urban Limit Line (ULL)* modification will be based on the Contra Costa County General Plan provision (*Land Use Element*, page 3-15, item (d)) that allows a minor change to the ULL (subject to a 4/5 vote of the Board of Supervisors) to more accurately reflect topographical characteristics of the property and the property boundary. This request will result in no net gain or loss of acreages inside or outside the ULL. Please also note that the project applicant has made further modifications to its application; the adjustment now requested would result in a net increase in open space outside the *Urban Limit Line*. Please refer to the responses to Comments 84.01 and 85.202.

The Draft EIR on page III-24 incorporated by reference the SR 4 Bypass EIR and incorporated the information regarding biological resources contained in that document. A summary of the significant environmental impacts that may be caused by the SR 4 Bypass, as it results to biological resources, is set forth below. The Bypass could directly or indirectly cause impacts to species including the Longhorn ferry shrimp, Vernal pool fairy shrimp, California Linderiella, San Francisco folktail

damselfly, California tiger salamander, California red-legged frog, Western Spadefoot toad, Northwestern pond turtle, California Horned Lark, Pallid bat, Townsend's western big-eared bat, and San Joaquin kit fox, and the habitat for these species. The Bypass would also affect seasonal wetlands, riparian habitat (the project right-of-way would cross six stream channels, including Sand Creek, Deer Creek, Marsh Creek, a tributary to Kellogg Creek, and an unnamed drainage tributary to Deer Creek) and would also result in the loss of non-native grassland. The majority of these biological resource impacts have been mitigated to a level of insignificance through mitigation measures and project changes. Some of the environmental impacts that would remain unavoidable include direct or indirect impacts on the San Joaquin kit fox, seasonal wetlands, and riparian corridors. Please refer to the SR 4 Bypass EIR for a full assessment of the project's impacts on biological resources. These documents can be obtained from the Contra Costa County Community Development Department at 651 Pine Street in Martinez. Please refer also the response to Comment 51.12, which discusses the basis for the EIR's conclusions regarding cumulative biological resource impacts.

- 85.140 The Draft EIR discusses the public health and safety impacts relating to the sandstone mine on the project site (please refer to *Impact PHS-8* and *Mitigation PHS-8* in Draft EIR section IV.M, Public Health and Safety, pages IV.M--30 through IV.M--31). Mining this site is not expected to result in any significant public health impacts, provided that *Mitigation PHS-8* is implemented. As suggested by the Draft EIR, if mining were to occur, it would occur in a sequence that would permit full mining before development occurred in that particular area (see *Mitigation PHS-8* and *Mitigation MR-1*). In addition, a *Mine Closure and Reclamation Plan* would be prepared before the mining would be allowed to occur (see *Mitigation MR-1*). This plan would include adequate measures to mitigate any environmental impacts that could occur as a result of the mining. The Draft EIR (page IV.H--6) has been modified to specifically require "public health" to be considered as a potential impact in the *Mine Closure and Reclamation Plan*.

Please refer to the response to comment 85.96. The two mining operations located in the area are located far enough from the project site that they would not cause significant impacts on the project.

- 85.141 An archaeological survey was performed over 100 percent of the Cowell Ranch property and no traces of the earlier Marsh adobe were discovered. Please refer to the response to comment 57.05. It would be overly speculative to guess what the cumulative effect of undiscovered cultural resources may be. The cultural resource impacts of the proposed project have been adequately disclosed in section IV.I of the Draft EIR. The significance of impacts on cultural resources inherently considers the cumulative effects. The significance of such resources is evaluated in a cumulative context.

- 85.142 Please refer to the response to Comment 85.114. The air quality section of the Draft EIR discussed the project's cumulative impacts on air quality. Cumulative impacts were determined using the guidelines issued by the Bay Area Air Quality Management District (BAAQMD). This evaluation is discussed on page IV.K--8 of the Draft EIR. In addition, as stated at page VI--6, cumulative development was incorporated into the Travel Model of Eastern Contra Costa County which was used to evaluate the local, regional (including cumulative) impacts on air quality.
- 85.143 The noise section of the Draft EIR discussed cumulative noise impacts. Specifically, the Draft EIR discussed the impacts from the project on noise in addition to noise impacts from the Sand Hill Ranch Motorcross Park, the Kellogg Creek Sand Quarry, and future operations of the Eastern Contra Costa County Airport. In addition, the Draft EIR analyzed the cumulative traffic noise impacts as specifically discussed on pages IV.L--35 and VI--6. The year 2026 noise contours for roadway traffic in the area are shown in Figure 76 of the Draft EIR. This figure can be used to judge the compatibility of future development with respect to County noise guidelines. Specific noise sources could be intrusive and make the environment less than ideal for residential development, but would not preclude a compatible noise environment, nor affect the overall day/night average sound levels. Cumulative noise impacts that could result from the development of this project would be limited to increased traffic noise levels along the roadways discussed in *Impact N-13*.
- 85.144 Please refer to the responses to Comments 85.128 through 85.142, regarding cumulative impacts.
- 85.145 Please refer to the response to Comment 1.20 for a discussion of the methodology of projecting future year roadway improvements for the future year analysis and the availability of funding for these improvements.
- 85.146 Please refer to the response to Comment 1.20.
- Assumptions regarding transportation projects funded through development fees are based on adopted population, housing, and employment forecasts made by regional agencies. These projections are widely accepted in the Bay Area. The comment in the Draft EIR (IV.C-32) is included as a cautionary statement only.
- 85.147 Please refer to the response to Comment 85.46.
- 85.148 Please refer to the response to Comment 2.13 for a discussion of the trip distribution predicted by the travel demand forecasting model.
- 85.149 Please refer to the response to Comment 2.13 for a discussion of the trip distribution predicted by the travel demand forecasting model.

85.150 The proposed crossing of State Route 4 Bypass cited in the comment is not recommended as a mitigation measure. The mitigation measure is simply to design the project in such a way that the possibility of constructing this crossing is maintained. Since the crossing itself is not proposed as a mitigation measure it is not necessary to analyze impacts associated with the crossing. Please refer to the response to Comment 85.49.

85.151 The closure of Concord Avenue recommended by *Mitigation T-4* reflected Brentwood General Plan circulation provisions in effect at the time of Draft EIR publication. The traffic re-routed due to the closure of Concord Avenue would be very local in scope and would only affect a few adjacent intersections. The effect on regional traffic would not be significant. Please note that in project Phase II, the Cowell Ranch project circulation would not connect directly to Fairview Avenue/Concord Avenue (see Draft EIR Figure 35).

Please also refer to the response to Comment 85.49 for additional discussion of the creation of a cul-de-sac on Concord Avenue.

85.152 The Draft EIR *Impact T-10* clearly states that the project's design does not conform to the roadway standards of the County and/or the City of Brentwood. *Mitigation T-10* requires applicant submittal of a revised circulation plan for review and approval by County staff. Thus, the County would be able to ensure that the project's roadway designs were adequate in terms of functionality and safety. In response to this comment and other comments, a provision has been added to *Mitigation T-10* calling for City of Brentwood review and approval of the revised circulation plan, if the project is annexed to the City.

85.153 Please refer to the responses to Comments 58.12 and 84.18.

The Draft EIR (page IV.C--69) clearly states "If no transit provider can afford to serve the site, the unmet demand for transit service and associated impacts on traffic congestion would remain a **significant unavoidable impact**." This sentence is not in "fine print" but is shown clearly in the text describing *Mitigation T-12*.

85.154 Please refer to the response to Comment 85.01 above.

85.155 Please refer to the responses to Comments 63.05, 74.42, 85.53 and 85.64.

85.156 The Woodward-Clyde (1988) and Wong and Biggar (1989) references were reviewed and are incorporated by reference into the Draft EIR. Findings and conclusions of the Draft EIR are unchanged.

85.157 Please refer to the responses to Comments 63.05, 74.42, 85.53, and 85.64.

85.158 Comment noted. Please refer to the response to Comment 85.55.

- 85.159 Comment acknowledged. The text of the EIR has been revised to clarify potential small fault displacement on inactive faults due to triggered slip on a large magnitude earthquake on the CRCV. (See section IV, Revisions to the Draft EIR (Errata).)
- 85.160 Comment acknowledged. Faults have been correctly relabeled on Figure 39. (See section IV, Revisions to the Draft EIR (Errata).)
- 85.161 Comment acknowledged. The Department of Water Resources (DWR) (1978) concludes that the Davis Fault is a normal fault. The Draft EIR text has been revised accordingly. (See section IV, Revisions to the Draft EIR (Errata).)
- 85.162 The Woodward-Clyde (1988) and Wong and Biggar (1989) references were reviewed and referenced in the Draft EIR. The Mayer (1996) reference is an unpublished Master's thesis and was not reviewed. The Wong et al. (1988) reference was not reviewed; however, their findings are discussed by Wakabayashi and Smith (1994) in a more recent, updated study that is referenced in the EIR.¹ Findings and conclusions of the Draft EIR are unchanged.
- 85.163 The level of detail suggested by this commenter is not appropriate for an EIR. The generalized description of fault activity and trenching at the site provided in the Draft EIR is appropriate.
- 85.164 As explained in the revised EIR text, a peak ground acceleration of 0.7g is appropriate for the characteristic earthquake occurring in the project vicinity on the Coast Range-Central Valley (CRCV) fault system.
- 85.165 Please refer to the responses to Comments 63.05, 74.42, 85.53, and 85.64.
- 85.166 Please refer to the responses to Comments 63.05, 74.42, 85.53, and 85.64.
- 85.167 Please refer to the responses to Comments 63.05, 74.42, 85.53, and 85.64.
- 85.168 Comment noted. Please refer to the response to Comment 85.60.
- 85.169 Please refer to the responses to Comments 63.05, 74.42, 85.53, and 85.64.

¹Mayer, J (1996) Geoarchaeological Implications of Holocene Landscape Evaluation in the Los Vaqueros Area of Eastern Contra Costa County, CA, Unpublished Masters Thesis, Sonoma State University, 118 p.; Wong, I.G., Ely, R.W., and Kollman, A.C., (1988), "Contemporary Seismicity and Tectonics of the Northern and Central Coast Ranges - Sierran Block Boundary Zone, CA," Journal of Geophysical Research, v. 45, no. B7, pp. 1813-7833.

85.170 As explained in the revised EIR text, a peak ground acceleration of 0.7g is appropriate for the characteristic earthquake occurring in the project vicinity on the Coast Range-Central Valley (CRCV) fault system.

85.171 Comment noted. Please refer to the response to Comment 85.55.

85.172 Please refer to the response to Comment 63.05.

85.173 The CEQA Guidelines (section 15364) define "feasible" as "*capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.*" This standard has been used to judge the feasibility of mitigation measures recommended in the Draft EIR. Please refer to the responses above for more detailed discussion of mitigation feasibility.

Mitigation LU-3 (Draft EIR, page IV.A--36) would require the project applicant to submit a *Project Housing Strategy* that specifies project housing affordability goals, and an associated *Housing Mix and Affordability Monitoring Program* that evaluates progress in meeting affordability goals. In addition, *Mitigation LU-11* (Draft EIR, pages IV.A--59 through IV.A--62) would require the applicant to formulate and submit an *Employment Development Program* that would include, among other components, onsite jobs/housing targets and a housing affordability program. These mitigations would address the concerns raised by this comment regarding provision of housing affordable to people employed at the proposed onsite business park.

85.174 The County and City General Plan policies referenced by this comment are cited in the Draft EIR, and are used as significance criteria for determinations regarding the significance of project impacts. Project consistency with these policies is discussed in the responses that follow.

85.175 Table 9 was developed based upon communication with county Community Development Department staff, contact with the local planning staffs of the cities of Pittsburg and Antioch, and contact with the San Joaquin County Community Development Department. In response to this comment, the table has been revised to add this source information. All of these agencies have received a copy of the Draft EIR. All of these agencies have commented on the Draft EIR. None of the comments received from the three agencies have pertained to Table 9, indicating that the list is acceptable. Whether an EIR has been certified for the various projects bears no relevance to the purpose of the compilation.

Relevant environmental documentation is properly referenced wherever it has been used in the preparation of the Draft EIR.

The text on Draft EIR page IV.A--8 explains that the Table 9 list includes new development "recently approved or currently under consideration by local jurisdictions in the subregion."

With respect to *timing*, where pertinent, the cumulative development data have been grouped into the three screen years addressed in various sections of the Draft EIR. Anticipated project phasing is indicated on Draft EIR pages III-32 through 38. As stated on Draft EIR page III--33, the various Draft EIR impact analyses are based on the assumption that project construction will commence on or after the year 1999, and that the project will reach full buildout over a period of 25 years and be complete and fully occupied by the year 2026. Anticipated project development sequences (Figure 13) have been grouped for traffic and impact analysis purposes into two phases: "Phase I," which would be completed by the year 2010 and "Phase II," which would be completed by the year 2026. The "screen years" used in the Draft EIR for the traffic and other impacts that relate to the project buildout sequence are 2010 (when Phase I of the project is completed) and 2026 (when Phase II of the project is completed). All cumulative data in the EIR, including the Table 9 data, is grouped into these two screen years, based upon the information sources cited above.

85.176 See Master Response C, especially items (1), (2) and (8).

85.177 A key purpose of the housing strategy is to reduce traffic congestion through balanced housing-versus-jobs development. This mitigation parameter--i.e., the performance standard, which is set forth under *Mitigation T-1*--is expected to provide sufficient mitigation assurance for the Master EIR purpose.

85.178 The proposed EDD parameters identified in the Draft EIR are considered sufficient without also requiring a specific percentage of project residents to be working within the project. See Master Response C, items 1 and 5.

85.179 The impact addressed by this mitigation does not pertain to fire flow; rather, the impact pertains to land use and visual compatibility with adjacent residential uses. The statement on Draft EIR page IV.A--67 that the design "criteria should address factors such as location, topographic separation, grading, setbacks from other uses, architectural design, and landscape screening" is sufficient for Master EIR purposes. The anticipated normal county and city procedures for review of subsequent projects, especially future subdivision plans, including design review, are deemed sufficient to ensure effective implementation of this measure.

85.180 The Draft EIR conclusion is that, given current wetland protection goals and regulations of the jurisdictional state and federal agencies, the wetland nature of these lands precludes crediting them as productive agricultural soils. The Draft EIR language here in no way suggests that therefore these areas can be developed. Rather, the point is that these areas should be protected as wetlands.

- 85.181 The Alternatives section of the EIR (section V) includes an alternative which incorporates avoidance of prime agricultural soils (see Draft EIR pages V-9 through V-16). The discussion describes how many units would have to be eliminated from each planning area (Table 82), and describes related effects on the balance between housing and jobs (page V--14) and other comparative impact implications.
- 85.182 County enforcement of the county-adopted Right-to-Farm Ordinance, in combination with proper implementation of the Project Occupancy Notification requirement, as called for in the Draft EIR, would be expected to have an effect similar to the measures suggested. No change in the Draft EIR in this regard is necessary.
- 85.183 In the opinion of the EIR geotechnical consultants, there will not be unusually high costs associated with mitigation of grading impacts for this project. Please refer to the response to Comment 63.12 above.
- 85.184 The comment questions the adequacy of *Mitigation D-1*.

As stated on page IV.E--18 of the Draft EIR, preliminary hydrologic analysis of the proposed improvements to Marsh Creek Reservoir in combination with the planned detention basin for the project would achieve the objective of reducing downstream peak discharge and peak flow duration in Marsh Creek. However, since these facilities have not yet been designed, additional detailed hydrologic/hydraulic analysis would be required prior to construction as a compliance measure. The purpose is to assure that the sizing, configuration and other design details provide the hydraulic control objectives demonstrated to be feasible through the preliminary studies completed by the CCCFCWCD. It is not necessary to complete the design-level studies at the Master EIR stage to verify that the impacts on Marsh Creek would be reduced to a less-than-significant level. *Mitigation D-1* is included to assure that the applicant follows through with the proposed plan and the required design studies. Please refer to the response to Comment 85.61.

- 85.185 The comment questions the deferral of channel improvement studies for correction of existing flooding problems on Marsh Creek (*Mitigation D-4*). Please refer to the response to Comment 59.01.
- 85.186 The comment suggests elimination of the golf course as a mitigation for water use and water quality impacts (*Impacts D-9* and *D-10*). Elimination of the golf course is another viable way of reducing the golf course impacts to a less-than-significant level. However, the mitigations identified in the Draft EIR (*Mitigations D-9* and *D-10*) would also reduce the impacts to a less-than-significant level. The economic demand for the golf course and whether or not it would be public or private is not a hydrologic or water quality issue. Please note that the "No Project" and "No General Plan Amendment" alternatives evaluated in section V (Alternatives to the Proposed Project) of the Draft EIR would eliminate golf course development on the site; comparative impacts on water use and water quality are described in section V.

The comment also asks that the golf course be prohibited unless it is irrigated with reclaimed water. There is no established County policy or ordinance to this effect, and the comment does not provide any compelling evidence to impose this restriction.

The comment also presents information on the fertilizer benefits achieved from the use of reclaimed water. Reclaimed water can supply a portion of the nitrogen and phosphorous fertilizer requirements for golf course turf grass and for parks within the project. This is a potential economic benefit, but it would not reduce the total amount of nitrogen and phosphorous that the golf course and parks will receive; it just changes the source and method of delivery to the turf grass. The use of reclaimed water would does not eliminate the potential for nutrient-water quality enrichment effects as identified in *Impact D-9*; and the recommended management measures (under *Mitigation D-9*) would continue to be necessary. The primary benefit of reclaimed water is for reduction in the raw water demand. The EIR authors agree that reclaimed water should be used for golf course and park irrigation if it is available to the project. However, the necessary supply of tertiary-level reclaimed water meeting State (Title 22, California Code of Regulations) standards for golf course and park irrigation is not currently available in the project vicinity. The EIR authors agree that reclaimed water should be used if it becomes available to the project.

- 85.187 The comment asks for documentation of the reference ET value of 48"/year cited in the Draft EIR. The source of this information is "Turfgrass Evapotranspiration Map - Central Coast of California," Leaflet 21491, Cooperative Extension University of California, Division of Agriculture and Natural Resource.
- 85.188 Please refer to the response to Comments 19.07 and Comment 44.01 regarding clarification of the status of the City of Brentwood's water supply capacity and the availability and commitment of water supply from BBID for the Cowell Ranch project. See response to Comment 19.18 regarding reference to the Los Vaqueros project.
- 85.189 The comment notes that annexation to either ECCID or BBID for supply of raw water would require annexation and sphere of influence changes that are not guaranteed. LAFCO approval would be required for the necessary boundary changes. This is a discretionary action that will not occur during the current Master EIR process for this project.
- 85.190 The comment notes that there are mandatory requirements for provision of reclaimed water pipelines and asks that the project be required to supply these facilities, and also that wastewater treatment facilities that serve the project be mandated to produce tertiary reclaimed water for the project.

Please refer to the response to Comment 49.03 regarding the addition of language to require dual pipelines to accommodate reclaimed water use. See response to Comments 49.01 and 85.186 regarding the provisions for wastewater reclamation. Any reclamation project would have to be "developed in cooperation" with the local

sewer and water supply agencies. The EIR authors agree that reclamation should be encouraged and that the project should provide the necessary onsite facilities and funding for treatment facilities to provide reclaimed water. However, the project cannot be held individually responsible for implementation of reclaimed water facilities.

- 85.191 Please refer to the responses to Comments 49.01, 74.40, 74.56, and 85.71. Impacts of project infrastructure costs on provision of affordable housing are outside the scope of this Master EIR. Please note that *Mitigation LU-3* requires the applicant to submit a *Project Housing Strategy* that specifies project housing affordability goals.
- 85.192 Please refer to the responses to Comments 48.03 and 58.07.
- 85.193 Please refer to the responses to Comment 74.57 and 85.72.
- 85.194 The assumption asserted in this comment, that the police services may undermine the affordable housing objectives, is speculative. No evidence is presented to back up this comment. Please refer to the response to comment 63.07 regarding fiscal impact analysis.
- 85.195 The final Cowell Ranch Habitat Management Plan (HMP) is currently being prepared for the applicant and will be submitted to the U.S. Fish and Wildlife Service for review some time in the fall of 1997. This HMP will include specific provisions for monitoring sensitive biotic resources in the open space preserve so that adjustments to the HMP can be made if any performance standards are not achieved (i.e., if any sensitive species are adversely affected).

Also, page IV.G-48 of the Draft EIR identifies a number of mitigation measures to protect kit fox habitat that supplement measures identified in the draft HMP. These Draft EIR-recommended measures include the following:

- Rodenticides on habitat mitigation lands within the dedicated open space shall not be used. Use of rodenticides within developed areas shall be limited.
- Contra Costa County leash laws shall be strictly enforced within the dedicated open space lands. Unleashed dogs shall not be permitted within the open space habitat mitigation lands.
- Public access to the mitigation lands shall be limited to pedestrian and equestrian uses on designated fire roads and trails.

- 85.196 Please refer to the responses to comments 28.01 and 62.02.
- 85.197 Please refer to the response to Comment 28.02.
- 85.198 Please refer to the response to Comment 28.03.

- 85.199 Item (c) under *Mitigation PF-19* on page IV.F--83 and --84 states that "prior to issuance of building permits for units in the various phases of the project, the applicant/developer should secure a 'will serve' letter from the BUSD guaranteeing that adequate space will be provided in schools on- or off-site."
- 85.200 As stated on page IV.F-85 of the Draft EIR, "the project would generate approximately 592 community college students, but this impacts would be offset by the provision of a 30-acre onsite community college campus." The finding that no additional mitigation is required is based on contact with CCCCD representatives, who have indicated that project provision of a 30-acre campus would be adequate to mitigate project impacts.
- 85.201 As discussed on page IV.F--97 of the Draft EIR, the Countywide Integrated Waste Management Plan estimates that the capacity of the Keller Canyon Landfill is sufficient to serve all existing and anticipated cumulative development in Contra Costa County for the next 30 to 40 years (beginning in 1992), depending on the County's success in meeting its source reduction and recycling goals. Assuming a worst-case scenario in which County source reduction and recycling efforts are not successful, the Keller Canyon Landfill would reach capacity in approximately the year 2022. According to the proposed project phasing plan, the project would be completely constructed by approximately the year 2026. Based on this analysis, and considering that the project would generate less than one percent of the total solid waste anticipated to be generated in the County by 2007 (the furthest year into the future for which the Countywide Integrated Waste Management Plan has calculated waste generation estimates), there is no basis for concluding that the project would have a significant impact on landfill capacity and that source reduction and recycling mitigation measures should be required. In reviewing future specific development plans for the project site, however, the County may wish to consider requiring recycling features (e.g., recycling bins in project homes, etc.).
- 85.202 Please refer to the responses to Comments 51.12 and 74.52.
- 85.203 The project would result in a temporal loss of blue oak woodland habitat value, which the Draft EIR acknowledges by recommending 3:1 and 5:1 replacement ratios (*Mitigation BR-2*). Over time this mitigation would provide for more blue oak woodland than currently exists, thereby compensating for the temporal loss of habitat value. Please refer to the response to Comment 59.06.
- 85.204 Flood control channels that would compromise riparian plantings on Marsh Creek have not been proposed as a part of this project. Please refer to the response to Comment 59.07.
- 85.205 Please refer to the responses to Comments 85.84 and 85.85.
- 85.206 LSA Associates did not conduct comprehensive surveys of the project site wetlands for vernal pool fairy shrimp, and therefore some potentially suitable habitat was not

surveyed in 1993. As discussed under *Impact BR-9* (pages IV.G--51 through IV.G--52), the Draft EIR assumes that additional potentially suitable habitat on the site could be occupied by one or more species of shrimp. As the commenter correctly points out, the Draft EIR could not identify how much additional shrimp habitat would be present on the site, and therefore could not identify how much replacement habitat would be required to mitigate impacts to less-than-significant levels. However, the available information allows the EIR to establish a potentially significant impact (*Impact BR-9*); to recommend appropriate mitigation (*Mitigation BR-9*), including a 2:1 habitat replacement ratio that would serve as a performance standard for ensuring the mitigation's effectiveness; and to conclude that the mitigation would reduce the impact to a less-than-significant level.

If more replacement habitat were required than could be accommodated on the site or could be economically constructed, then the applicant would be obligated to modify the project in order to decrease impacts; avoidance is one of the mitigation measures recommended by the Draft EIR. However, the preservation component of required wetland mitigation can readily be met onsite. As indicated in the response to Comment 85.86, results of the surveys conducted during the winter of 1996-97 confirm that impacts on vernal pool shrimp habitat would be limited to 0.3 acre. As also indicated in the response to Comment 85.86, artificial seasonal pools are known to provide suitable habitat for vernal pool fairy shrimp.

Please refer also to section IV, Revisions to the Draft EIR (Errata), for revisions to *Mitigation BR-9* that provide more detail regarding USFWS requirements.

85.207 Please refer to the response to Comment 51.08.

85.208 Please refer to the responses to Comments 1.12, 1.14, 43.12, 43.01, 43.22, 58.23, 59.11, 64.01, 67.23, 74.66, 85.83, 85.89, and 85.90.

85.209 Please refer to the responses to Comments 43.32, 51.10, 59.09, and 85.92. Replacing breeding habitat and enhancing aestivation habitat through range management practices that favor larger ground squirrel populations are measures that can reasonably be expected to increase the tiger salamander population within the open space preserve. Because tiger salamanders do not show great fidelity to natal ponds (see Dr. Brad Schaeffer's work at the Hastings Preserve in the Carmel Valley), there is no reason to believe that replacement breeding ponds would not be used. It is believed that most tiger salamanders aestivate within 0.5 mile of breeding habitat, but this does not mean that each breeding pond requires 125 to 500 acres of aestivation habitat. In fact, the number of salamanders present within a given area will be dependent on a variety of factors, including slope, obstacles to movement, and available rodent burrows, among others. Ground squirrel numbers on the project site are relatively low, no doubt due to rodent control programs of the recent past. *Mitigations BR-1* and *BR-8* will favor ground squirrel populations, thus increasing aestivation opportunities for tiger salamanders.

There are currently 14 stock ponds within the proposed 2,700-acre onsite open space preserve that serve as breeding habitat for tiger salamanders. Recommended mitigation measures would increase the number of stock ponds to 28 or possibly more. According to the draft HMP, tiger salamander breeding habitat would not be clustered. The distances between breeding ponds after completion of recommended mitigation measures would vary from approximately 500 to 2,000 feet. Vernal pool wetland complexes in other parts of the tiger salamander's range have pool densities many times greater than that proposed for the project site.

- 85.210 Comment acknowledged. Please refer to the response to Comments 51.11 and 85.93. Table 56 has been revised to be consistent with the Draft EIR text (see Section IV, Revisions to the Draft EIR (Errata)). The ground squirrel population on the project site was relatively low, as evidenced by relatively few ground squirrel burrows (LSA Associates, 1993). Management of the site to increase ground squirrel populations would benefit burrowing owls. As indicated in the Draft EIR, the project would preserve 2,700 acres of grassland habitat as open space preserve. The EIR biological consultant is satisfied that CDFG mitigation requirements can be met within this area.
- 85.211 Please refer to the response to Comment 85.96. In response to this comment, Planning Area 46 has been added to *Mitigation MR-1* as a planning area where development should not occur until sandstone has been mined. Implementation of *Mitigation MR-1* would be generally feasible within the approximately 25-year buildout period of the proposed project. The project applicant would be responsible for identifying any changes to the proposed project phasing plan necessary to implement *Mitigation MR-1*.
- 85.212 Please refer to the responses to Comments 85.99 and 85.102.
- 85.213 There is an established history and record demonstrating to a reasonable degree that adopted P-1 District Development Standards, including standards pertaining to the mitigation of visual impacts, will be adequately implemented. Implementation of Planned District Development standards is required under local zoning law. There is a demonstrated record that the specific procedures for implementation of these standards, as well as the legally established overall development review process for future individual project applications within a P-1 zone, provide reasonable assurance that the measures will be implemented. Under current state and local legislation, the required process for each individual application includes planning staff review, CEQA review, design review, Planning Commission review, public review, and Board of Supervisors (or City Council) review and approval.
- 85.214 The acoustical studies recommended in *Mitigation N-8* would include recommendations for noise insulating measures in structures (including residential, commercial, school, and other public service buildings) to reduce aircraft noise. As indicated in the discussion of *Mitigation N-8* (Draft EIR, page IV.L--28), these

measures would be required to meet both California Noise Insulation Standards and local noise standards; compliance with these standards would ensure the effectiveness of the measures. Development in the affected area could not occur unless the noise standards cited in *Mitigation N-8* are met. The additional recommended mitigation, disclosure of potential intermittent noise impacts to prospective buyers and renters, would help to mitigate the impact by giving advance notice of the potential noise problem, thereby allowing people who may experience the most disturbance from aircraft noise to locate elsewhere.

85.215 Please refer to the response to Comment 85.119 above.

85.216 *Mitigation N-9* is intended to address project impacts on airport operations, not the impact of airport operations on project residents; the latter impact is addressed in *Impact N-8* and *Mitigation N-8*. Please refer to *Mitigation N-8*, and to the response to Comment 85.214 above, for discussion of mitigation for the impacts of aircraft noise on sensitive land uses.

85.217 Comment acknowledged. This comment suggests additional mitigation measures for potential noise impacts of the Kellogg Creek Sand Quarry on future development within the project, including a restriction of the hours of operation of the quarry to daytime hours when the residential population is less sensitive, and restrictions on haul routes and haul route hours. These are reasonable recommendations that have been incorporated into *Mitigation N-11*. At the time that the specific development plans for the project site are submitted, the corresponding level of activity at the quarry can be determined and specific measures imposed to meet the performance standard set forth in *Mitigation N-11*.

85.218 See responses 55.04, 74.37, 85.13 and 85.104.

85.219 Please refer to the response to Comment 85.118 above. Relocation or "buyout" of the motorcross park by the applicant is another option that the applicant may wish to consider as a means of mitigating potential noise impacts identified in *Impact N-12*.

85.220 In response to this comment, Mitigation PHS-2 has been slightly modified to include review and approval by the County regarding the size of the buffer between the gas compression facility and the project.

85.221 The dust control measure requiring watering twice daily in active construction areas is a performance standard that construction contractors should be required to meet. Calculation of required water supply to meet this standard is difficult due to uncertainties regarding the duration of activity, the amount of land disturbed at any one time, and the potential use of dust palliatives that reduce water demand for dust control. At typical application rates from watering trucks, twice daily application would require about 5,000 gallons of water per acre.

It is possible that water demand could exceed supply if construction is occurring simultaneously at enough of the site at one time. The imposition of the performance standard for dust control under such conditions would limit the amount of area that can be under active construction at that time. A limited water supply does not make this mitigation measure infeasible, but may require rescheduling of construction or greater use of dust palliatives as a substitute for watering.

85.222 See responses to comments 85.176, 2.12, 11.01, and 11.03.

85.223 Please refer to the response to comment 64.07.

85.224 As indicated by the commenter, the list of relevant environmental goals and policies in section IV.A (Land Use) of the Draft EIR (pages IV.A--25 through IV.A--31) is used as significance criteria for determinations regarding the significance of project impacts. Relevant inconsistencies with these goals and policies are cited and discussed in the evaluation of land use impacts in Section IV.A (e.g., in the discussion of *Impact LU-1*, pages IV.A--32 through IV.A--33 of the Draft EIR). This approach is consistent with CEQA Guidelines section 15125(b), which states that "*the EIR shall discuss any inconsistencies between the proposed project and applicable general plans and regional plans*" (emphasis added). The CEQA Guidelines do not appear to require an exhaustive discussion of project consistency with each potentially applicable goal or policy, but rather an indication of project inconsistencies with relevant planning documents.

85.225 The discussions and findings under *Impact LU-4* adequately address this city policy to the extent that it may involve a physical environmental effect (i.e., physical deterioration of the downtown).

Mitigation LU-4 in no way suggests that project residents be discouraged from shopping within the project boundaries. The proposed downtown transit link is vital to achieving project compliance with the Brentwood General Plan and with fulfilling the centralized village concept as explained in the Draft EIR. With respect to project consistency with the City's goals pertaining to its downtown, please see city comment 78.14.

85.226 Please refer to the responses to Comments 85.07 and 85.52 above.

85.227 Contra Costa General Plan Land Use Element Goal 3-8 is utilized throughout the impact analyses in section IV.F of the Draft EIR to determine impact significance. Project impacts are considered to be significant if they conflict with applicable environmental plans adopted by agencies with jurisdiction over the project or policies of the community. (See for example, *Impact PF-2* on page IV.F--22 of the Draft EIR.) Please refer to the response to Comment 63.01 regarding fiscal analysis.

85.228 The comment asks for analysis of reclaimed water opportunities within the project.

Please refer to the response to Comment 49.01. The policy cited requires opportunities for using reclaimed water to be identified and developed in cooperation with the appropriate agencies. The policy does not mandate the use of reclaimed water, nor does it mandate detailed environmental analysis as asked for by the commenter.

85.229 Please refer to the preceding responses for discussion of the issues of mitigation adequacy and feasibility, and project consistency with County and City General Plan provisions, raised by this comment.

IV. REVISIONS TO THE DRAFT EIR (ERRATA)

The following section includes all revisions to the Draft EIR made in response to public and Lead Agency comments received during the public review period for the Draft EIR.

Please note: All text revisions in the following errata section are indicated by an "r" in the left margin next to the revised line.

All of the revised pages supersede the corresponding pages in the Draft EIR. None of the changes included in the following errata section represents a significant increase in impact or a significant new impact or mitigation need not already discussed in the Draft EIR.

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r	G. Supplemental Cultural Resources Data	
r	H. Supplemental Visual Analysis Data	
r	I. Supplemental Air Quality Data	
r	J. Supplemental Public Health and Safety Data	
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I. INTRODUCTION

A. EIR PURPOSE

This environmental impact report (EIR) describes the environmental implications of the Cowell Ranch project, a proposed mixed-use urban development that could ultimately contain up to 5,226 dwelling units, 1.86 million square feet of commercial and business park floor space, a golf course, and associated public, institutional, open space, recreational and infrastructure uses, on a 4,277-acre site in East Contra Costa County. The site is partially within the City of Brentwood Sphere of Influence¹ and surrounds the Marsh Creek Reservoir.

As used in this EIR, the terms "Cowell Ranch project" and "project" refer to the current Cowell Ranch development applications, which includes a proposed general plan amendment (including Urban Limit Line adjustment), P-1 (Planned Unit Development) rezoning, and development agreement.

This EIR has been prepared for the Contra Costa County Community Development Department (currently the lead agency)² in keeping with State requirements set forth by the California Environmental Quality Act (CEQA). The report is intended to inform County decision-makers, the City of Brentwood, other responsible agencies, and the general public of the proposed project and the environmental consequences of its approval.

CEQA Guidelines stipulate that an EIR is intended to serve as a public information and disclosure document, identifying those environmental impacts associated with the proposed project that are expected to be significant, and describing mitigation measures and alternatives that could minimize or eliminate these significant impacts.³ Such impacts and mitigation needs are discussed in this EIR at the level of detail necessary to allow reasoned

¹State *General Plan Guidelines* define the sphere of influence of a city as "the probable physical boundary and service area" of that city; sphere of influence boundaries are established (adopted) in every county by the Local Agency Formation Commission (LAFCO), in this case, by the Contra Costa County LAFCO. On March 9, 1995, LAFCO placed 2,185 acres of the 5,500-acre Cowell Ranch site within Brentwood's SOI boundary. The portion of the site placed within Brentwood's SOI was the portion within the county's adopted *Urban Limit Line* boundary; the remaining acreage was outside the ULL.

²CEQA Guidelines define the "lead agency" as the public agency that has the principal responsibility for carrying out or approving a project.

³CEQA Section 15149(b).

decisions about the current development application. As a result of the information in this EIR, the responsible decision-makers may act to approve or deny these various actions, and to establish any associated requirements or conditions on project design, construction, and

operation that are deemed warranted in order to mitigate identified project impacts on the environment.

The discussions in this EIR of impacts, mitigation measures, and alternatives are intended to address all environmental issues to be resolved and all areas of controversy identified by the County in its Initial Study¹ for the proposed project. In addition, guidance received by the County from other agencies, organizations, and individuals in response to the County's Notice of Preparation² has been considered in determining the scope and content of this EIR.

- r The County also intends that this EIR shall serve as the CEQA-required environmental documentation for consideration of this project by other responsible agencies³ and trustee agencies⁴ including, but not limited to, the City of Brentwood, the Contra Costa County Local Agency Formation Commission (LAFCO), the Regional Water Quality Control Board, the California Department of Fish and Game, the California Department of Health, the California Department of Transportation (Caltrans), the United States Army Corps of Engineers, and the United States Fish and Wildlife Service.

B. EIR TYPE AND APPROACH

1. Master EIR

CEQA identifies different types of EIRs, each designed to address specific situations and types of projects. This EIR is a Master EIR.

a. Master EIR Purpose. Under CEQA, a Master EIR may be prepared when the proposed project consists of any of the following four actions: (1) a general plan amendment, (2) a series of smaller individual projects carried out in phases, (3) a rule or regulation implemented by subsequent projects, or (4) projects carried out pursuant to a development agreement.⁵

¹The county's Initial Study for the Cowell Ranch project is included in Appendix A of this EIR.

²The Notice of Preparation is a CEQA-required brief notice sent by the Lead Agency to notify the Responsible Agencies, Trustee Agencies, and involved federal agencies that the Lead Agency plans to prepare an EIR for the project, and solicits guidance regarding EIR scope and content.

³Under CEQA Guidelines, the term "Responsible Agency" includes all public agencies, other than the Lead Agency, which have discretionary approval power over aspects of the project for which the Lead Agency has prepared an EIR.

⁴Under CEQA Guidelines, the term "Trustee Agency" means a state agency having jurisdiction by law over natural resources affected by the project which are held in trust by the people of California.

⁵April 6, 1994 letter to Wagstaff and Associates, from Patricia E. Curtin, Gagen, McCoy, McMahon & Armstrong, attorneys for the applicant.

The applicant has submitted requests and applications that meet these criteria,¹ including applications for: (a) a general plan amendment to adopt the proposed preliminary development plan land use designations and an associated adjustment to the County-designated Urban Limit Line, (b) a corresponding P-1 rezoning, and (c) a development agreement. These application documents, which are on file with the Contra Costa County Community Development Department, set forth rules and standards that will govern development on the site. Development will involve numerous smaller individual, subsequent projects, each one implementing the overall plan. These individual, subsequent projects, and anticipated project phases, which are more fully described in section III.B of this EIR, include individual housing subdivisions and commercial/employment uses, and extension of services, roads, and other infrastructure as necessary to accommodate full buildout of the Cowell Ranch project. (Anticipated *subsequent projects* that would be within the scope of the Master EIR are described in more detail in section III.C of this EIR, Intended Uses of the EIR.)

The purpose of a Master EIR is three-fold. First, the Master EIR studies the full range of impacts expected from complete buildout of the entire proposed development, with particular attention to cumulative impacts, alternatives, growth-inducing impacts, and irreversible significant effects. Second, the Master EIR identifies, to the extent feasible, appropriate mitigation measures to be applied to subsequent implementing actions. Third, the Master EIR statutes set forth the process of *subsequent environmental review* for future projects.²

r The concept of the Master EIR is similar to that of tiering environmental review. The
r preparation of a Master EIR allows the lead agency and the public first to decide whether it is
r a good idea to allow development on the project site. If the decision is made in the
r affirmative, then each individual project can be reviewed in-depth at a later stage with
r additional environmental review, to the extent necessary. If on the other hand, the lead
r agency rejects the overall development concept, then future consideration can be dropped
r and the time and resources that would have been spent on the in-depth planning and review
r would not be wasted.

2. Future Environmental Review

Subsequent projects that are proposed within the preliminary development plan boundary shall be subject to environmental review as follows:

a. Initial Study. First, the lead agency must prepare an initial study to (1) confirm whether the subsequent project was described in this Master EIR (section III.C, Intended Uses of the EIR) as being within the scope of the report; and (2) determine whether the subsequent

¹Ibid.

²See Public Resources Code Sections 21157.1, 21157.5, 21157.6, 21157.7, 21158 and 21158.5. If the law changes, appropriate subsequent environmental review will be determined in light of those changes.

r = Indicates revised line; i.e., revision to Draft EIR made in response to public comment.

project may cause any significant effect on the environment that was not examined in this Master EIR.

b. Subsequent Projects Confirmed to Be Within the Scope of this Master EIR. Second, for those projects confirmed in the initial study as being within the scope of this Master EIR, the lead agency must follow one of the following procedures and give the requisite notices (Notice of Determination), depending on the other conclusions of the initial study:

internal and downstream drainage capacities and flooding conditions (Marsh Creek, Kellogg Creek, Briones Creek, and Dry Creek); project relationships to planned regional drainage improvement plans (particularly its effects on the adequacy and timing of planned improvements within County Drainage Areas #104 through #108); and impacts on downstream water quality during and after construction.

6. **Public Facilities and Services.** Public facilities and services issues include the implications of the project for local and regional water service and supply, sewage collection and disposal, police services, fire and emergency medical services, parks and recreation, public schools, child care, solid waste, and other facilities and services (civic facilities, post offices, libraries, and utilities).

7. **Biological Resources.** Biological resource issues include project effects on the site's existing vegetation and wildlife values, wetland and riparian habitats, and in particular, on any possible sensitive, rare, or endangered species, including those identified as having state or federal special status and known to occur in the area.

8. **Mineral Resources.** Mineral resource issues include project impacts on known or suspected onsite sand and sandstone deposits, and oil or natural gas fields.

9. **Cultural Resources.** Cultural resource issues include the potential effects of project grading and construction activities on possible onsite archaeological or historical features.

10. **Visual Factors.** Visual issues include the impacts of the proposed project land use pattern, densities, roadway alignments, and related grading and landscape features on view and the rural setting south of Brentwood.

11. **Air Quality.** Air quality issues include the effects of project-related mobile emissions increases, point sources (e.g., wood burning stoves, lawn mowers, mechanical systems), and short-term construction activities on local and regional air quality.

r 12. **Noise.** Noise issues include the impacts of the planned SR 4 Bypass, the adjacent PG&E gas terminal and compressor station, and the Byron Airport on project residential, school, and other sensitive areas, as well as the local roadway noise impacts (onsite and offsite) of project-related traffic increases.

r 13. **Public Health and Safety.** Public health and safety issues include the potential health and safety implications of the electrical transmission lines and underground natural gas lines which traverse the site, and the adjacent PG&E gas terminal and compressor station; potential exposure of project occupants to health hazards associated with past agricultural activities or future golf course maintenance (pesticides, herbicides, etc.); possible cinnabar mercury contamination in Marsh Creek and Marsh Creek Reservoir; and possible future hazardous materials storage on the project site.

(NOP).¹ As described in the Introduction to this EIR, these areas of environmental concern include:

1. Land use,
2. Agriculture,
3. Transportation,
4. Soils and geology,
5. Drainage, flood control, and water quality,
6. Public facilities and services,
7. Biological resources,
8. Mineral resources,
9. Cultural resources,
10. Visual factors,
11. Air quality,
12. Noise,
13. Public health and safety, and
14. Energy.

C. SUMMARY OF IMPACTS AND MITIGATION MEASURES

Each significant project impact and associated mitigation measure identified in this master EIR is summarized in the SUMMARY OF IMPACTS AND MITIGATION MEASURES chart that follows. The summary chart has been organized to correspond with the more detailed impact and mitigation discussions in Chapter IV of this EIR. The chart is arranged in five columns: (1) significant adverse environmental impacts, (2) level of impact significance prior to implementation of recommended mitigation measures, (3) recommended impact mitigation measures, (4) entity responsible for implementing each mitigation measure and timing of implementation, and (5) level of impact significance after implementation of the mitigation measure(s). The mitigation responsibility identified in the summary chart is preliminary; the Contra Costa County Board of Supervisors will assign responsibility for implementation of mitigation measures.

For a complete description of the environmental setting, impacts, and mitigation measures associated with each particular topic of concern, please refer to section IV of this EIR.

¹See Appendix A for the NOP.

SUMMARY OF IMPACTS AND MITIGATION MEASURES

r (Note: "Mitigation Responsibility" assignments are preliminary; the Contra Costa County Board of Supervisors will assign
r responsibility for implementation of mitigation measures.)

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility (Timing Code)	Potential Significance With Mitigation
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LAND USE

Impact LU-1: Loss of Open Space. The project at buildout would result in the irreversible loss of approximately 1,269 acres of open space currently designated for agricultural use by the <u>Contra Costa County General Plan</u> and would require changes in the County <u>General Plan</u> -designated <i>Urban Limit Line</i> and the <i>Brentwood Sphere of Influence</i> . This conversion of general-plan-designated open space to urban use would contribute to the Bay Area's continued urban expansion and the regional and subregional trend toward decentralization, outlying suburban growth, decreased separation between communities, and associated continuing encroachment onto agricultural and open space lands.	S	Because open space cannot be feasibly created, no mitigation is available.	NA	SU
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S = Significant
LS = Less than significant
SU = Significant unavoidable impact
NA = Not applicable

Mitigation Timing Codes

1 = Condition of Current Project Approval
2 = Condition of Subsequent Project Approval (letter code indicates type of subsequent approval--see end of table for detail)

r = Indicates revised line; i.e., revision to Draft EIR made in response to public comment.

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility (Timing Code)	Potential Significance With Mitigation
Impact LU-2: Substantial Population Increase Exceeding Regional Projections. The project would induce substantial growth and concentration of population, and would cause	S	If the General Plan Amendment proposed by the project is approved, the project-related population increase would be reflected in subsequent ABAG projections, which are based	County/ ABAG (1)	LS

S = Significant
 LS = Less than significant
 SU = Significant unavoidable impact
 NA = Not applicable

Mitigation Timing Codes
 1 = Condition of Current Project Approval
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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility (Timing Code)	Potential Significance With Mitigation
local population to exceed official regional population projections.		in part on local government land use policies such as general plans.		
Impact LU-3: Impacts on Regional Housing Needs. If the project fails to meet the affordability needs of a range of households and income levels, it could be unsuccessful in complying with regional housing need determinations.	S	Require the project applicant to submit a <i>Project Housing Strategy</i> that specifies project housing affordability goals, and an associated <i>Housing Mix and Affordability Monitoring Program</i> that evaluates progress in meeting affordability goals.	County/ applicant (1)	LS
Impact LU-4: Substantial Change in Physical Arrangement of Brentwood Community. The project, as a mixed use, master planned development offering a range of housing and employment opportunities, would be generally consistent with the <u>Brentwood General Plan</u> (SPA "J") land use policies for the site, but nevertheless could substantially alter the existing physical arrangement of Brentwood.	S	r Since the project is within the designated planning area of the Brentwood General Plan, County decision making on the project development plan and the relationship of these components to the existing and planned land use pattern of Brentwood to the north shall include consultation with the City of Brentwood. The objective of the consultation shall be to ensure project coordination with the City General Plan policies pertaining to development along the State Route 4 Bypass and to provide an integral relationship between the project and the adjacent Brentwood community.	NA	r LS
Impact LU-5: Impacts on Commercial Retail and Office Development in Brentwood. Depending on the nature of future commercial uses, project-proposed commercial retail and	LS	r No significant adverse environmental impact has been identified; no mitigation is required under CEQA.	County/ applicant/ City of Brentwood	LS

S = Significant
LS = Less than significant
SU = Significant unavoidable impact
NA = Not applicable

Mitigation Timing Codes

1 = Condition of Current Project Approval
2 = Condition of Subsequent Project Approval (letter code indicates type of subsequent approval--see end of table for detail)

r = Indicates revised line; i.e., revision to Draft EIR made in response to public comment.

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility (Timing Code)	Potential Significance With Mitigation
		<p>r Although not required under CEQA, anticipated project impacts on the viability of existing commercial development in Brentwood could be reduced through (a) project commercial zoning limitations, and (b) establishment of direct and</p>		

S = Significant
 LS = Less than significant
 SU = Significant unavoidable impact
 NA = Not applicable

Mitigation Timing Codes
 1 = Condition of Current Project Approval
 2 = Condition of Subsequent Project Approval (letter code indicates type of subsequent approval--see end of table for detail)

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility (Timing Code)	Potential Significance With Mitigation
<p>office development may detract substantial business from existing commercial development in Brentwood, representing a <i>potentially significant environmental impact</i>. Under CEQA, an economic impact shall not be treated as a significant environmental impact unless there is a chain of cause and effect to a significant adverse physical (environmental) impact. No evidence of such a cause and effect has been identified for this economic impact.</p>		convenient transit service between the project and downtown Brentwood.		
<p>Impact LU-6: Impacts on Rural Residential Uses. The project, combined with other pending and/or approved development, would alter the existing rural residential character of the south Brentwood vicinity by introducing urban development, roadway and other improvements, and project-related traffic and associated noise.</p>	S	Implement mitigation measures identified in section IV.J, Visual Factors, of this EIR to lessen the visual impact of the project on surrounding rural residential areas.	County/ applicant (1, 2F)	SU
<p>Impact LU-7: Impacts on John Marsh Home State Park Site. The project would (1) extend a major thoroughfare through the northern portion of the John Marsh Home State Park site; and (2) close Marsh Creek Road south of the Marsh Creek Reservoir, restricting access to the park from the south.</p>	S	As recommended under <i>Mitigation PF-17</i> in section IV.F, Public Facilities and Services, require the applicant to provide greater than 1:1 compensation for any loss of useable park area that would result from the extension of the project's major thoroughfare through the northern portion of the park site by dedicating a	County/ applicant/ State Park Dept./City of Brentwood/ John Marsh Historic Trust,	LS

S = Significant
 LS = Less than significant
 SU = Significant unavoidable impact
 NA = Not applicable

Mitigation Timing Codes
 1 = Condition of Current Project Approval
 2 = Condition of Subsequent Project Approval (letter code indicates type of subsequent approval--see end of table for detail)

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility (Timing Code)	Potential Significance With Mitigation
		portion of the proposed adjoining community park and/or open space area to the state. Also require the applicant to prepare specific design studies for the project/state park relationship that (1) show in detail the relationship of the	Inc. (1)	

S = Significant
LS = Less than significant
SU = Significant unavoidable impact
NA = Not applicable

Mitigation Timing Codes
1 = Condition of Current Project Approval
2 = Condition of Subsequent Project Approval (letter code indicates type of subsequent approval--see end of table for detail)

r = Indicates revised line; i.e., revision to Draft EIR made in response to public comment.

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility (Timing Code)	Potential Significance With Mitigation
		thoroughfare to the State Park site; (2) locate the major thoroughfare as far as possible from the John Marsh Home; (3) define an alignment and point of closure for Marsh Creek Road that has the maximum positive effect on the park and adjoining entrances, parking areas, and open spaces areas; and (4) provide for landscape screening along the south side of the proposed major thoroughfare to block views from the John Marsh Home State Park site. Require State Park Department, Contra Costa County, and City of Brentwood approval of the specific design studies.		
Impact LU-8: Impacts on Contiguous Northeast Portion of SPA "J". The proposed project would introduce multi-family residential and parks and recreation uses in the northeastern portion of the project site, adjacent to existing agricultural uses in the contiguous northeast portion of Brentwood's Special Planning Area (SPA) "J". Development of these urban land uses on the project site, combined with construction of the State Route 4 Bypass, could be expected to introduce incompatible adjacent urban activities and encourage urban development of this offsite portion of SPA "J."	S	Implement <i>Mitigation AG-4</i> .	County/ applicant (2C)	LS

S = Significant
LS = Less than significant
SU = Significant unavoidable impact
NA = Not applicable

Mitigation Timing Codes
1 = Condition of Current Project Approval
2 = Condition of Subsequent Project Approval (letter code indicates type of subsequent approval--see end of table for detail)

r = Indicates revised line; i.e., revision to Draft EIR made in response to public comment.

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility (Timing Code)	Potential Significance With Mitigation
the rate of homes constructed and the rate of onsite job development. In addition, the <u>total</u> number of employed residents currently anticipated at buildout of project Phases I and II (approximately 7,849) would substantially exceed the number of onsite jobs (approximately 6,628) (see Tables 6 and 7 on pages III-42 and III-43). These factors indicate that in the interim phases of project buildout, and when buildout is reached, a substantial number of onsite employed residents may commute elsewhere to work to a degree that would be inconsistent with County and City general plan policies calling for a balance of new housing and job opportunities.		(a) onsite jobs/housing targets, (b) infrastructure phasing to foster early and continuous employment development, (c) an employment development marketing strategy (with provisions for County, City of Brentwood, and Contra Costa Community College District involvement), (d) a hiring program, (e) a housing affordability program, (f) an annual reporting procedure, and (g) an ongoing monitoring and enforcement program. The EDP shall cover the projected 26-year course of Phase I and Phase II buildout. With the monitoring and enforcement provisions, there is reasonable assurance that these measures would achieve an adequate balance between the development of housing and jobs.		
Impact LU-12: Resident Access to Onsite Jobs and Services. Approximately 3,000 (56 percent) of the project housing units would not be located within convenient walking distance (one-quarter mile) of the proposed project commercial, job, and transit centers in the East Village, North Village, and East Creekside subareas.	S	Provide an internal transit system (shuttle buses or demand-responsive vans) which serves occupied areas of the project which are not with convenient walking distance of the two village centers, and provide a transit and small-scale convenience commercial center in the Golf Course Residential subarea for senior citizen residents of this subarea, and implement transit-related measures identified in <i>Mitigations T-1</i> and <i>T-12</i> .	County/ applicant (1, 2C)	LS

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Impact AG-3: Impacts on Remaining Onsite Agricultural Uses. The project proposes urban development adjacent to areas proposed to be designated as <i>Open Space</i> and zoned for agricultural use, including the existing alfalfa field on the west side of the Marsh Creek Road right-of-way and the cattle grazing area in the northern portion of the site. This juxtaposition of urban and agricultural/grazing uses would create the potential for health risks and nuisance complaints due to incompatibilities between urban and agricultural land uses, and the potential for increased conflicts between project and agricultural traffic on surrounding public streets.	S	Provide for setbacks or agricultural buffers, dense landscaping, and construction of fencing consistent with the project <i>Habitat Management Plan</i> in the portions of Planning Areas 1, 2, 5-8, 12, and 61 that adjoin existing or potential future agricultural areas. Require that onsite agricultural activities be consistent with the approved <i>Habitat Management Plan</i> for the project. Provide for project occupant notification regarding agricultural activities and the County's <i>Right-to-Farm Ordinance</i> . Enforce the County's leash law. Require and enforce a provision that all future agricultural practices on the northern quarter of the existing alfalfa fields be "organic" as defined in the California Organic Food Act of 1990.	County/ applicant (1, 2C, 2D)	LS
Impact AG-4: Impacts on Offsite Agricultural Uses. The project would enable urban development adjacent to existing grazing land and cultivated agricultural cropland north and east of the site. This juxtaposition of urban and agricultural/grazing uses would create the potential for health risks and nuisance complaints, as described for <i>Impact AG-3</i> .	S	Implement mitigation measures described above for <i>Impact AG-3</i> in the identified northern and eastern portions of the site.	County/ applicant (1, 2C, 2D)	LS

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<p>Impact AG-5: Precedent-Setting Impacts on Nearby Agricultural Uses. Approval of the project may eventually result in similar requests by property owners of the remaining northeast portions of SPA "J" to follow the project precedent and revise other segments of the <i>Urban Limit Line</i> and redesignate other parcels from <i>Agricultural Core</i> to urban use in order to accommodate urban development. Precedent-following conversion of such parcels to urban use would result in further losses of County-designated <i>Agricultural Core</i> and actively cultivated prime agricultural land.</p>	S	<p>Require a rigorous review process for any such additional request to change the <i>Urban Limit Line</i> and/or <i>Agricultural Core</i> designation on nearby agricultural lands. Any additional application or request to change the <i>Urban Limit Line</i> or the <i>Agricultural Core</i> designation would require an amendment to the General Plan. Approval of such changes would require a rigorous review process for each proposed change; the <u>Contra Costa County General Plan</u> identifies a number of findings which must be made in order to approve an <i>Urban Limit Line</i> change. A 4/5ths vote of the Board of Supervisors is required for approval of an <i>Urban Limit Line</i> change. Any such changes would also require public hearings and environmental review as mandated by state law.</p>	NA	LS
TRANSPORTATION				
<p>Impact T-1: Offsite Traffic Conditions Exceeding Level of Service Standards. The project would cause conditions which exceed traffic level of service standards at numerous offsite roadway links and intersections by the year 2010 (when Phase I of the project is completed) and by the year 2026 (when Phase</p>	S	<p>As a condition of approval for each individual future development application within the Cowell Ranch project that the County determines may have a significant traffic impact, the applicant shall demonstrate to <u>County satisfaction</u> that a specific combination of the following measures would occur that together would achieve</p>	County/ applicant (2D, 2G)	LS, except SU at (1) SR 4 freeway between Railroad Avenue and

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II of the project is completed). (NOTE: See section IV.C, Transportation, of this EIR for		compliance with the applicable roadway system <i>performance standard</i> in effect for each		the State Route 4

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details regarding project impacts at specific roadway links and intersections.)		primary, secondary, and regional roadway system component identified in this program EIR as subject to a <i>potentially significant impact</i> : (1) fair-share funding towards the offsite <u>roadway link improvements</u> necessary to accommodate increased travel demand resulting from the project; (2) fair-share funding towards the offsite <u>intersection improvements</u> necessary to accommodate increased travel demand resulting from the project; (3) travel demand management (TDM) measures to reduce the amount of project-generated peak period travel by automobile; and (4) management of project buildout to foster a balance between new residential and job development. (NOTE: See section IV.C, Transportation, for details regarding recommended mitigation measures.)		Bypass (Year 2026), and (2) Vasco Road (Year 2010 and Year 2026)
Impact T-2: Cumulative Degradation of Level of Service on Balfour Road in the Vicinity of the State Route 4 Bypass. Urban development in Brentwood General Plan Special Planning Areas "G," "H," "I," and the remaining portions of "J" south of Balfour Road, combined with the proposed project, would contribute to cumulative traffic congestion on Balfour Road and potentially at the route's proposed grade-separated crossing of the State Route 4 Bypass	S	The County should require the project to preserve the opportunity for a new east-west arterial south of Balfour Road by dedicating right-of-way on Briones Valley Road along the project's frontage for an ultimate four-lane arterial. The new east-west arterial would connect Deer Valley Road and the Fairview Avenue extension in the Briones Valley Road corridor.	County/ applicant/ City of Brentwood (1, 2B, 2D, 2G)	LS

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connecting the area within the existing Brentwood city limits with the North Hills subarea of the project ("M" Street).		r Refinement of this mitigation measure should occur as part of Brentwood's planning for SPAs r "G," "H," "I," "K," and the remainder of "J."		
Impact T-3: Impacts Due To Abandonment of Marsh Creek Road. Marsh Creek Road immediately south of the North Village subarea would be abandoned in Phase II of the project. As a result, travellers from the Cowell Ranch project destined towards Clayton and Concord would have to take a less convenient, more circuitous route to exit the project to the southwest. Also, travellers from outside the project who would otherwise use Marsh Creek Road as a through route would be diverted to other routes, such as Camino Diablo and Walnut Boulevard.	S	Require the applicant to dedicate adequate right-of-way for an ultimate four-lane arterial (110 feet) along Camino Diablo between Marsh r Creek Road and Walnut Boulevard, and r construct the necessary horizontal and vertical r realignments and intersection channelization to r accommodate the revised travel patterns r created by traffic diverted from the closure of r Marsh Creek Road. Mitigations for traffic increases at the Marsh Creek Road/Walnut Boulevard and Camino Diablo/Byron Highway intersections are identified above (see <i>Mitigation T-1</i>).	County/ applicant (1)	LS
Impact T-4: Increase in Urban Traffic on Concord Avenue through the <i>Agricultural Core</i>. The project would create the potential for increased traffic intrusions into the County-	S	As a condition of approval, the potential for increased traffic intrusions into the County-designated <i>Agricultural Core</i> area shall be r mitigated by closing Concord Avenue at the r Marsh Creek bridge when development occurs r west of the bridge, or increased traffic occurs. r The bridge will only be used as an emergency r vehicle access (EVA) after it is closed. Closure	County/ applicant (1, 2D, 2G)	LS

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<p>designated <i>Agricultural Core</i> area due to roadway connections to the project at Fairview and Concord Avenues. A comparison of auto demand volumes between project and no-project conditions shows a projected 98-percent increase in the AM peak hour and a 92-percent increase in the PM peak hour volumes for 2010, and a 68-percent increase in the AM peak hour and 55-percent increase in the PM peak hour for 2026 on this Fairview/Concord Avenue segment. Additionally, the Concord Avenue/SR 4 Bypass intersection will operate at LOS E (0.97) in the AM peak hour and LOS F (1.16) in the PM peak hour in the year 2010 <u>without</u> the project, and at LOS F (1.23) in the AM peak hour and LOS F (1.36) in the PM peak hour <u>with</u> the project. Concord Avenue east of the project site is currently a rural two-lane farm road without shoulders and is not designed to accommodate both rural and urban traffic volumes.</p>		<p>r of Concord Avenue shall occur in consultation r with PG&E and the County, to ensure to County r satisfaction that adequate industrial equipment r truck access to and from the existing PG&E Gas r Terminal and Compressor Station is provided by r this or an alternative route.</p>		
<p>Impact T-5: Construction-Related Traffic Impacts. Interim traffic related to the various future project construction phases (e.g., trucks, other equipment) would increase general and heavy vehicle traffic volumes on local roadways.</p>	S	<p>As a condition of approval for each individual future development application, require implementation of measures to reduce project construction-period traffic impacts. These measures should be documented in a <i>construction traffic plan</i> approved by the Contra Costa County Public Works Department.</p>	County/ applicant (2C)	LS

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Impact T-6: Safety Impacts Due to Inadequate Pedestrian Access to School Sites. Collector streets adjoining the proposed elementary and middle school sites would not contain sidewalks on both sides of the street. The project circulation plan also does not specify provisions for street widening or off-street zones for automobile drop-off and pick-up of students.	S	Require the project to submit proposed onsite roadway designs and pedestrian crossings adjacent to school sites to Contra Costa County Public Works Department for review and acceptance prior to any Final Development Plan approval.	County/ applicant (2C)	LS
Impact T-7: Safety Impact Due To Cul-De-Sac Length in Planning Area 32. The approximately 1,400-foot-long southwestern cul-de-sac in Planning Area 32 would be too long to allow efficient ingress and egress by emergency vehicles, trash collection vehicles, and other vehicles.	S	Revise the proposed development plan to shorten the southwestern cul-de-sac in Planning Area 32 to a maximum length of 600 feet.	County/ applicant (1, 2C, 2D, 2G)	LS
Impact T-8: Safety Impact Due To Single Access to Planning Area 37. Under the proposed project circulation layout, the only access to the community college in Planning Area 37 would be through the business park in Planning Area 38, creating an awkward entry condition to an important area and providing only a single access point for emergency vehicles.	S	Revise the proposed development plan to provide a separate access road for the community college along the northern edge of Planning Area 38.	County/ applicant (1, 2C, 2D, 2G)	LS

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bike lane on one side only, adjacent to a parking lane, which would not be consistent with County design standards. It is not clear from the circulation plan which bicycle facility would be provided where and how they would connect. There is a potential for pedestrian and bicycle conflicts on joint use paths where no parallel bike lane is provided.		proposed bicycle and pedestrian facilities including their design standards.		
Impact T-12: Adequate Transit Service. The project has the potential to substantially increase demands for transit service. Provision of adequate transit service to the Cowell Ranch area is not assured.	S	Conditions for approval of the project should include language requiring provision of shuttle services to regional transit systems, and requiring the developer to conform to Tri-Delta Transit (or other transit provider) requirements for provision of transit service.	County/ applicant (1, 2C)	LS (if transit provider(s) can extend service to project--if not, SU)

SOILS AND GEOLOGY

Impact SG-1: General Geologic/Geotechnical Impacts. The overall combination of potential cut and fill slope instabilities, differential settlement, potential for erosion and sedimentation due to proposed mass grading of onsite hills, expansive and liquefiable soils, landslide deposits, other slope instabilities, soil creep, and seismic hazards on the project site,	S	Together with the mitigations recommended for <i>Impacts SG-2 through SG-13</i> , require subsequent geologic/geotechnical investigations, establish grading limitations, require grading progress and completion reporting, and establish a Geologic Hazards Abatement District.	County/ applicant (1, 2D)	LS
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Impact SG-14: Marsh Creek Reservoir Dam. The project would place residents, structures, and improvements downstream of the offsite Marsh Creek Reservoir dam. Potentially liquefiable soils, seismic instability, and ongoing erosion represent a potential threat to the integrity of the dam, creating a potential safety hazard for the project in the event of earthquake-induced dam failure and flooding.	S	As a joint project of the Contra Costa County Flood Control and Water Conservation District (CCCFCWCD) and the Department of Water Resources (DWR) Division of Dam Safety, reevaluate the stability of Marsh Creek Reservoir using current standards and considering proposed downstream development, and formulate and implement warranted mitigations.	CCCFCWCD/ DWR (1)	LS

DRAINAGE, FLOOD CONTROL, AND WATER QUALITY

Impact D-1: Marsh Creek. The post project discharge rate will continue to exceed the capacity of the channel and may increase the <u>duration</u> of overbank flooding downstream of the project site between Concord Avenue and Dry Creek.	S	Require the applicant to design improvements in accordance with CCCFCWCD standards. This shall be confirmed through applicable hydraulic and hydrologic studies.	CCCFCWCD/ applicant (2D, 2G)	LS
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Impact D-2: Marsh Creek. The project will increase the amount of impervious surfaces and hence the <u>volume of runoff</u> from Marsh Creek watershed. Detention basins will be utilized to control peak flow rates. However, due to the increased volume of runoff detention basins will sustain flows that may result in additional	S	r Require the project applicant to analyze the downstream Marsh Creek channel for possible channel erosion impacts and pay the applicable drainage fees for Drainage Area 107 and 108 as determined by the County to fund the project's fair share proportionate cost of improvements to the Marsh Creek watershed. Analysis of	CCCFCWCD/r applicant (2D, 2G)	SU
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<p>r erosion and creek bank instability on and</p> <p>r downstream of the project site.</p>		<p>r channel material, bed slope, channel flow</p> <p>r velocity and flow duration may be required. If</p> <p>r this analysis demonstrates that the impact will</p> <p>r occur, the applicant shall either (1) alter the</p> <p>r detention basin design (e.g., by enlarging the</p> <p>r basin, changing, the outlet design, etc.), or</p> <p>r (2) improve channel areas susceptible to</p> <p>r increased erosion due to the project related</p> <p>r alterations in flow magnitude and duration.</p> <p>r Consistent with the Master EIR approach, more</p> <p>r information will be required at the time of a</p> <p>r future specific project review to determine if, as</p> <p>r expected, the impact has been mitigated to a</p> <p>r less-than-significant level. Until the impact has</p> <p>r been determined to be adequately mitigated, the</p> <p>r project's effect on the downstream Marsh Creek</p> <p>r channel would represent a significant,</p> <p>r unavoidable impact.</p>		

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Impact D-3: Kellogg Creek. The peak discharge rate would continue to exceed the capacity of the channel and the project would increase the <u>volume of runoff</u> entering Kellogg Creek at the project site. Currently, the channel is unimproved.	S	r Require the applicant to pay applicable drainage fees for <i>Drainage Area 109</i> as determined by the Contra Costa County Flood Control and Water District to fund the project's fair-share proportionate cost of improvements to the Kellogg Creek channel downstream of the project site.	CCCFCWCD/ applicant (2D, 2G)	LS
Impact D-4: Marsh Creek Channel Capacity. Portions of the project along Marsh Creek between the Marsh Creek Reservoir and Concord Avenue would remain subject to flooding.	S	r Require the applicant to submit for Contra Costa County Flood Control and Water District review and approval (1) development standards and engineering information demonstrating that the proposed below dam development controls along the creek will eliminate 100-year flooding potentials along this sensitive reach of Marsh Creek, or (2) plans to increase the Marsh Creek channel capacity between the Marsh Creek Reservoir and Concord Avenue, an associated maintenance plan for vegetative thinning, and a commitment to meeting all jurisdictional approval requirements associated with modifying the creek channel (California Department of Fish and Game, and U.S. Army Corps of Engineers). Also, require compliance with all pertinent Contra Costa County regulations concerning runoff and flooding, especially Title 9 (Sections 914-2.002 through 914-2.006) of the County Zoning Ordinance. Consistent with the Master	CCCFCWCD/r applicant (2D, 2G)	SU

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		<p>r EIR approach, more information will be required</p> <p>r at the time of a future specific project review to</p> <p>r determine if, as expected, the impact has been</p> <p>r mitigated to a less-than-significant level. Until</p> <p>r the impact has been determined to be</p> <p>r adequately mitigated, the project's effect on the</p> <p>r downstream Marsh Creek channel would</p> <p>r represent a significant, unavoidable impact.</p>		

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Impact D-5: Localized Flooding Impacts. Proposed structures in the Golf Course Residential subarea (e.g., housing, the golf course clubhouse) may be subject to flooding from Briones Creek.	S	Locate all project structures outside the 100-year flood plain of Briones Creek and comply with all pertinent Contra Costa County regulations concerning runoff and flooding, especially Title 9 (Sections 914-2.002 through 914-2.006) of the County Subdivision Ordinance.	CCCFCWCD/ applicant (2D, 2G)	LS
Impact D-6: Dry Creek Channel Capacity and Erosion Impacts. The project could increase flooding and channel erosion in the reach of Dry Creek above the Dry Creek Reservoir.	S	<p>r Submit for Contra Costa County Flood Control and Water District review and approval plans for flood control improvements along the reach of Dry Creek above the Dry Creek Reservoir. Also, comply with all pertinent Contra Costa County regulations concerning runoff and flooding, especially Title 9 (Sections 914-2.002 through 914-2.006) of the County Subdivision Ordinance. If the improvements require changes to the channel itself, this will be subject to additional environmental review. Consistent with the Master EIR approach, more information will be required at the time of a future specific project review to determine if, as expected, the impact has been mitigated to a less-than-significant level. Until the impact has been determined to be adequately mitigated, the project's effect on the downstream Marsh Creek channel would represent a <i>significant, unavoidable impact</i>.</p>	CCCFCWCD/r applicant (2D, 2G)	SU

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Impact D-7: Erosion and Sedimentation Impacts. Soil disturbance associated with grading activities during project construction, improperly controlled discharge of project runoff into open space areas, and steep slopes adjacent to proposed development areas could increase soil erosion and sedimentation.	S	Require the applicant to (a) file a <i>Notice of Intent</i> with and obtain an NPDES General Permit from the RWQCB, (b) prepare and implement a <i>Stormwater Pollution Prevention Plan</i> , (c) implement a monitoring, inspection, and documentation program to ensure the effectiveness of control measures, and (d) conduct sedimentation analyses of the Marsh Creek and Dry Creek Reservoirs after project construction and offset any identified project-related increase in reservoir sedimentation per County requirements.	County/ applicant (1, 2C, 2D, 2G)	LS

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Impact D-8: Urban Runoff Pollutant Impacts. Urban pollutants from project impervious surfaces would degrade the quality of receiving waters.	S	Include measures to control urban runoff pollutants in the NPDES General Permit-required <i>Stormwater Pollution Prevention Plan</i> .	County/ applicant (1, 2G)	LS
Impact D-9: Golf Course Fertilizer Impacts. Fertilization of the proposed golf course may increase the amount of nitrogen reaching project vicinity water bodies, causing over-enrichment and eventual eutrophication.	S	Prepare, submit for County review and approval, and implement a detailed <i>Golf Course Management Plan</i> that specifies appropriate fertilizer application practices.	County/ applicant (2C, 2E)	LS
Impact D-10: Golf Course Pesticides/Herbicide Impacts. Golf course pesticide and/or herbicide use could potentially degrade the water quality of project area drainages.	S	Incorporate appropriate pesticide/herbicide use practices in the required <i>Golf Course Management Plan</i> .	County/ applicant (2C, 2E)	LS
PUBLIC FACILITIES AND SERVICES				
Impact PF-1: Treated Water Supply. A supply of treated water does not currently exist to adequately meet the potable water demand of the project.	S	Implement <u>one</u> of the following mitigation options to secure a reliable treated water supply for the project. Either (a) annex the planned urban development acres of the project to the City of Brentwood and implement a reliable long-term Brentwood water supply solution adequate to serve the project, <u>or</u> (b) the project sponsor shall exercise its water service agreement with the BBID and either (1) provide	County/ applicant/ City of Brentwood/ BBID/CCWD (1, 2A, 2B, 2G)	r SU

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility (Timing Code)	Potential Significance With Mitigation
		<p>on-site water treatment <u>or</u> (2) contract with either the City or CCWD for water treatment.</p> <p>r Annexation to the City of Brentwood would also</p> <p>r be required under option (b). Consistent with</p> <p>r the Master EIR approach, more information will</p> <p>r be required to determine if, as expected, the</p> <p>r impact has been mitigated to a less-than-</p> <p>r significant level. Until adequate conveyance</p> <p>r and distribution facilities are in place, the</p> <p>r project's effect on the adequacy of raw water</p> <p>r supply would represent a significant</p> <p>r unavoidable impact.</p>		
<p>Impact PF-2: Raw Water Supply. The project would require a total of 547 acre-feet of raw (untreated) water for irrigation of the proposed golf course, parks and landscaping. A raw water supply does not currently exist to meet the irrigation water demand of the project.</p>	S	<p>Implement <u>one</u> of the following mitigation options to provide a reliable raw water supply for project irrigation needs: (a) annex the project site to the ECCID for provision of the needed water <u>or</u> (b) exercise the project sponsor's water</p> <p>r service agreement with the BBID. Additionally,</p> <p>r the applicant shall cooperate with the City of</p> <p>r Brentwood for the development of reclaimed</p> <p>r water supplies, and, to the extent practicable,</p> <p>r shall use such reclaimed water to meet non-</p> <p>r potable irrigation demand of the project. The</p> <p>r project shall also be required to install dual</p> <p>r water pipelines to areas that could potentially be</p> <p>r provided reclaimed water for non-potable uses.</p>	<p>County/ applicant/ ECCID/ BBID (1, 2A, 2G)</p>	<p>r SU</p>

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility (Timing Code)	Potential Significance With Mitigation
		<p>r Consistent with the Master EIR approach, more</p> <p>r information will be required to determine if, as</p> <p>r expected, the impact has been mitigated to a</p> <p>r less-than-significant level. Until adequate</p> <p>r conveyance and distribution facilities are in</p> <p>r place, the project's effect on the adequacy of</p> <p>r raw water supply would represent a significant</p> <p>r unavoidable impact.</p>		
<p>Impact PF-3: Conveyance and Distribution Facilities. Needed on- and off-site water system improvements are not in place to serve the project.</p>	S	<p>For each future individual development component of the overall project, require</p> <p>(a) applicant submittal of detailed studies and</p> <p>r water system improvement plans; and</p> <p>(b) County approval (or City of Brentwood approval, if the site is annexed to Brentwood) of</p> <p>r all designs and constructed improvements.</p> <p>r Such water system improvements shall be sized</p> <p>r to meet the demands generated solely by the</p> <p>r project. Offsite water line extensions shall be</p> <p>r located within public roadway rights-of-way. The</p> <p>r applicant shall also be required to pay the costs</p> <p>r of updating the City of Brentwood Infrastructure</p> <p>r Master Plans. Consistent with the Master EIR</p> <p>r approach, more information will be required to</p> <p>r determine if, as expected, the impact has been</p> <p>r mitigated to a less-than-significant level. Until</p>	County/ applicant/ City of Brentwood (2B, 2D, 2G)	SU

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		<p>r adequate conveyance and distribution facilities</p> <p>r are in place, the project's effect on the</p> <p>r adequacy of raw water supply would represent a</p> <p>r significant unavoidable impact.</p>		
<p>Impact PF-4: Drought Contingency and Water Conservation Planning. The project may be subject to water limitations during drought periods.</p>	S	Implement water conservation measures and comply with all applicable provisions of AB 325.	County/ applicant (2D)	LS

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility (Timing Code)	Potential Significance With Mitigation
Impact PF-5: Wastewater Collection System Impacts. Needed on- and off-site sewer collection facilities are not in place to serve the project.	S	For each future individual development component of the overall project, require (a) applicant submittal of detailed studies and sewer system improvement plans; (b) County approval (or City of Brentwood approval, if the site is annexed to Brentwood) of all designs and constructed improvements; and (c) developer construction or fair-share funding of all project-related on- and off-site sewer improvement needs. The applicant shall also be required to (a) pay the costs of updating the City of Brentwood Infrastructure Master Plans, and (b) compensate the Garin Ranch developer for the oversizing of sewer facilities that was required by the City of Brentwood to accommodate the Cowell Ranch project. Consistent with the Master EIR approach, more information will be required to determine if, as expected, the impact has been mitigated to a less-than-significant level. Until	County/ applicant/ City of Brentwood/ (2B, 2D, 2G)	r SU
Impact PF-6: Wastewater Treatment Capacity Impacts. Sufficient wastewater treatment capacity does not currently exist to serve the project.	S	Adhere to County policies regarding the project timing and phasing to correspond to the availability of needed infrastructure capacity. Also, implement <u>one</u> of the following additional mitigation options to provide adequate wastewater treatment for the project: (a) annex	County/ applicant/ City of Brentwood (1, 2B, 2D, 2G)	r SU

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility (Timing Code)	Potential Significance With Mitigation
		<p>the project to the City of Brentwood and implement a long-term wastewater treatment solution adequate to serve the project, <u>or</u> (b) the project sponsor shall provide on-site treatment and disposal, with approvals as required from the Regional Water Quality Control Board. If an onsite facility is constructed, it shall be designed and operated to supply reclaimed water within the Cowell Ranch project. If the project is not served by an onsite facility, the applicant shall be assessed sewerage fees sufficient to support the project's fair share contribution to the development and operation of a wastewater treatment facility that produces reclaimed water for irrigation uses in the general project area. Consistent with the Master EIR approach, more information will be required to determine if, as expected, the impact has been mitigated to a less-than-significant level. Until</p>		
<p>Impact PF-7: Sheriff's Department Service Demand Impacts. The Contra Costa County Sheriff's Department would require additional staffing, equipment, and possibly a new substation to provide police protection service to</p>	S	<p>Require the applicant to prepare a <i>Public Services and Facilities Plan</i> (PSFP) that specifies funding for and phasing of adequate police services and facilities, for review and approval by the Sheriff's Department.</p>	County/ applicant (1)	LS

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Impact PF-17: State Park Impacts. The estimated 13,076 project residents would also increase the demand for State park facilities such as Mt. Diablo State Park and the future John Marsh Home State Park, and the proposed project major thoroughfare would pass through a portion of the park site.	S	Require the project applicant to coordinate the community park design with the State's restoration and development program for the John Marsh Home State Park site (see EIR section IV.A). As part of this process, require the applicant to dedicate a portion of the proposed adjoining community park to the State, as a means of (1) expanding the State park; (2) providing for more efficient design, construction, and maintenance of both the community park and the State park; and (3) compensating the State for the loss of useable park area that would result from the extension of the project's major thoroughfare through the northern portion of the park site. Alternatively, a portion of the proposed <i>Open Space</i> area adjoining the east side of the State park site could be dedicated to the State.	County/ applicant/ State Park Dept. (1)	LS
Impact PF-18: Project Impacts on the BUSD Capacity. The two proposed onsite elementary school sites and the one proposed onsite middle school site would ultimately provide adequate capacity to accommodate the estimated approximately 1,157 elementary school students and 504 middle school students generated by the project. However, school construction may not be adequately funded to ensure that	S	Require the applicant to (1) comply with applicable BUSD/LUHSD impact fee requirements, and (2) as a requirement of the County's development agreement with the applicant, and as recommended in the County's <u>Conditions for a 21st Century Community</u> (Condition 2, page 15), to submit a project <i>school financing and cost distribution plan</i> , to be established prior to the recording of each	County/ applicant/ BUSD/ LUHSD (2D)	LS

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Impact PF-21: Project Impacts on the LUHSD Capacity. The project would generate approximately 609 high school students.	S	<p>r Provide a high school site at an appropriate location within the project boundary that meets reasonable size, topographic, and locational requirements described by the LUHSD (currently described as 40 acres of relatively flat land) and all applicable site selection standards of the State Board of Education. In addition,</p> <p>r implement <i>Mitigation PF-18</i> above.</p>	County/ applicant/ LUHSD (2D)	LS
Impact PF-22: School Siting Impacts. The middle school site and the two elementary school sites proposed by the project would not meet all school site selection standards established by the State Department of Education.	S	To mitigate potential health and safety impacts associated with the proposed middle school site and elementary school sites, require the applicant to comply with (a) <i>Mitigation PHS-3</i> regarding natural gas pipelines, (b) <i>Mitigation T-6</i> regarding pedestrian safety, (c) <i>Mitigations N-1</i> and <i>N-2</i> regarding noise exposure, and (d) <i>Mitigations SG-1, SG-7, SG-8, and SG-13</i> regarding geologic hazards.	County/ applicant (1, 2C, 2D)	LS
Impact PF-23: School Transportation Impacts. The westernmost portions of the North Hills and East Hills residential areas would be located approximately one mile from the nearest elementary school site, and most of the project homes would be located outside of a reasonable walking distance from the middle school.	S	As a provision of the County/applicant development agreement, require the applicant to work with the BUSD to formulate a feasible plan for bus service for elementary school and middle school students residing more than one-half mile from school, and incorporate the busing plan into the <i>School Phasing Plan</i> required in <i>Mitigation PF-19</i> .	County/ applicant/ BUSD (1, 2D)	LS

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Impact PF-24: Child Care Impacts. The 4,533 non-senior housing units proposed by the project would generate a need for at least 1,010 child care slots, and the 1.85 million square feet	S	Require applicant compliance with the County's Child Care Facilities Ordinance by establishing a <i>child care mitigation plan</i> , developed in consultation with the Contra Costa Child Care	County/ applicant (1)	LS

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of proposed commercial floor space would generate an additional child care need.		Council and included as an element of the recommended project <i>Public Services and Facilities Plan</i> (see <i>Mitigations PF-7 and PF-11</i> above). Measures to be considered for providing onsite child care should include requiring onsite business park development to provide child care and developing child care facilities in conjunction with proposed onsite schools (as recommended by the County's <u>Conditions for a 21st Century Community</u>). The County shall verify that the proposed <i>child care mitigation plan</i> would meet the requirements of the Child Care Facilities Ordinance, and would provide for adequate child care facilities for each phase of the project.		
Impact PF-25: Household Hazardous Materials Impacts. Project housing would generate approximately 60.4 tons of household hazardous waste per year.	S	Implement <u>Countywide Integrated Waste Management Plan</u> programs relating to permanent household hazardous wastes collection facilities, mobile collection services, interim one-day collection events, recycling, and curbside collection, and require the project to (1) participate in and pay its fair share for relevant programs, and (2) include these requirements in the recommended project <i>Public Service and Facilities Plan</i> .	County/ applicant (1)	LS

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<p>the East Village and East Hills subareas, including single-family housing on a ridgeline in Planning Area 52. On the segment <u>between Marsh Creek Road and the northern project site boundary</u>, close range views would consist of large areas of urban development in the North Village and North Hills subareas, including high density single-family housing on a ridgeline in Planning Area 11; intermediate views would consist of moderate to large areas of development in the North Village and North Hills subareas (including single-family development at the high point of a ridgeline in Planning Area 30); and a small portion of the Golf Course Residential subarea would be visible in distant views. The project-proposed increase in urban development along this corridor could substantially and negatively detract from views of croplands, rangelands, hillsides, and ridges.</p>		<p>development applications involving Planning Areas 6-11, 16, 17, 21, 23, 24, 26-30, 32, 33-40, and 42-60 with consideration to views from the SR 4 Bypass. Require special landscaping in accordance with City of Brentwood-proposed landscape plans for the SR 4 Bypass corridor.</p>		
<p>Impact V-8: Views from Round Valley Regional Park. The majority of the development and associated grading in the Golf Course Residential and North Village subareas would be visible in distant views towards Brentwood from Round Valley Regional Park, along with smaller portions of the North Hills, West Creekside, East Creekside, East Village, and East Hills</p>	S	<p>Amend the <i>Cowell Ranch P-1 Planned Unit District Development Standards</i> proposed by the applicant to include hillside development standards that promote preservation of significant land forms or hilltops, reduction in development intensity, grading limitations on steep slopes, contour grading, revegetation, and sensitive landscaping. Impose these standards</p>	County/ applicant (1, 2C, 2D)	SU
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r subareas. These views could include ridgeline development in the North Hills subarea (Planning Areas 11 and 12), and in the East Hills subarea (Planning Area 52); and development at the high point of a ridge in the Golf Course Residential subarea (Planning Area 32) and in the North Hills subarea (Planning Area 3). These changes would substantially and negatively detract from the predominantly rural character of this existing view, altering existing views of onsite open rangeland, hillsides, and ridges.		on a case-by-case basis when reviewing future development applications involving Planning Areas 3, 7, 8, 10-12, 16, 19, 21-28, 30-33, 38, 39, 41, 42, 52, and 61, with consideration to views from Round Valley Regional Park. While these measures would help to reduce the project's impact on views from Round Valley Regional Park, the basic alteration of the existing rural character of the project site as viewed from the regional park would remain a significant, unavoidable impact of the project.		
r Impact V-9: Views from Morgan Territory Regional Preserve. The majority of the development and grading in the North Village subarea would be visible in distant views, towards Brentwood from the Morgan Territory Regional Preserve, along with smaller portions of the Golf Course Residential, North Hills, West Creekside, East Creekside, East Village, and East Hills subareas. These views would include ridgeline development in the North Hills subarea (Planning Areas 11 and 30), and development at the high point of a ridge in the East Hills subarea (Planning Area 52). These changes would substantially and negatively detract from the predominantly rural character of this existing	S	Eliminate development in Planning Area 61, as recommended in <i>Mitigation V-4</i> . Amend the <i>Cowell Ranch P-1 Planned Unit District Development Standards</i> proposed by the applicant to include hillside development standards that promote preservation of significant land forms or hilltops, reduction in development intensity, grading limitations on steep slopes, contour grading, revegetation, and sensitive landscaping. Impose these standards on a case-by-case basis when reviewing future development applications involving Planning Areas 3, 7, 8, 10, 11, 12, 16, 19, 21-28, 30-33, 38, 39, 41, 42, and 52, with consideration to views from Morgan Territory Regional Preserve.	County/ applicant (1, 2C, 2D)	SU

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		segments of the key project travel corridors, strategic planting along affected community park areas, etc.). Although these measures would reduce the visual implications of the power lines, these adverse visual impacts could not be reduced to less-than-significant levels, given the height, prominence, and distracting nature of the existing tower lines. The visual effect of the transmission lines on the identified residential and community park areas would remain a significant, unavoidable impact .		
<p>r Impact V-12: PG&E Gas Terminal and Compressor Station. The project proposes multi-family residential uses in relatively close proximity to the existing PG&E Gas Terminal and Compressor Station, which is lighted after sunset with high luminaires.</p>	S	<p>Incorporate setback and landscaping requirements in the project for the area surrounding the PG&E Gas Terminal and Compressor Station which, to the County's satisfaction, are adequate to screen direct views of the facility, to block direct views of the facility luminaires or other exterior light sources, and to prevent direct light intrusion into residential and other sensitive areas from compressor station exterior lighting. Adjustment of the Cowell Parkway alignment on the west side of the facility may be necessary to provide adequate setbacks and landscaping; this should be determined through County review (or City of Brentwood review, if the project is annexed to</p>	County/ applicant (1, 2C, 2D)	LS

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approximately 680 feet of the center line of the SR 4 Bypass at the proposed community college site.				
Impact N-4: Noise from Normal Operation of PG&E Facility. A portion of the proposed single-family residential development in Planning Area 10 would be exposed to average operational noise levels from normal operational events of the PG&E Gas Terminal and Compressor Station which exceed City of Brentwood-recommended limits.	S	Require one or a combination of the following treatments to reduce noise to acceptable levels during the daytime and nighttime: (a) applicant cooperation with PG&E to secure funding for acoustical louvers, silencers, or equipment enclosures on the PG&E Gas Terminal and Compressor Station to provide an additional 5 dBA of noise reduction; (b) incorporation of noise control berms or barriers at the tops of onsite graded slopes close to project residences, in conjunction with the grading plan, to provide 5 dBA of attenuation for the nearest proposed residences; and/or (c) revision of the proposed site plan to provide an open space buffer or area containing less noise-sensitive land uses, such as maintenance facilities, parking lots, or recreational uses within 600 feet of the compressor building.	County/ applicant/ PG&E (2, 2C, 2D)	LS
Impact N-5: Noise from 10-Inch Pipeline Blowdown at the PG&E Facility. Maximum A-weighted noise levels from 10-inch pipeline blowdown events at the PG&E Gas Terminal and Compressor Station (which occur approximately	S	Require disclosure of PG&E blowdown activities to prospective homebuyers in Planning Area 10. Noise from 10-inch pipeline blowdowns could be mitigated by PG&E by using a blowdown truck silencer, reducing the pipeline pressure prior to	County/ applicant/ PG&E (2D)	LS

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once very two years) would exceed 100 dBA at the proposed single-family residential land uses in Planning Area 10.		the blowdown, and notifying nearby residents that the event is planned.		
Impact N-6: Noise from Compressor Unit Blowdown and Compressor Unit Emergency Shutdown at the PG&E Facility. The maximum A-weighted noise levels from a compressor unit blowdown at the PG&E Gas Terminal and Compressor Station are predicted to exceed the 70 dBA daytime limit and the 65 dBA nighttime limit at the proposed residential land uses in Planning Area 10.	S	Require one or a combination of the following treatments to reduce noise to acceptable levels during the daytime and nighttime: (a) applicant cooperation with PG&E to secure an additional 5 to 7 dBA of noise reduction on the compressor unit blowdown discharge piping; (b) incorporation of noise control berms or barriers at the tops of onsite graded slopes close to project residences, in conjunction with the grading plan, to provide 5 to 7 dBA of attenuation for the nearest proposed residences; and/or (c) revision of the proposed site plan to provide an open space buffer or area containing less noise-sensitive land uses (see <i>Mitigation N-1</i>) within 700 feet of the compressor unit blowdown stack.	County/ applicant/ PG&E (1, 2C, 2D)	LS
Impact N-7: Noise from Two-Inch Relief Valve Blowdowns at the PG&E Facility. Noise levels from occasional two-inch relief valve blowdowns at the PG&E Facility would be expected to substantially exceed the City of Brentwood's daytime and nighttime intermittent	S	Require the applicant to work with PG&E to secure funding for high performance mufflers on the two-inch pipes to provide the necessary noise mitigation. A determination must be made by PG&E as to how many pipes require mufflers. Permanent installation of these	County/ applicant/ PG&E (1, 2C, 2D)	LS

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nearby. Construction activities during various phases would be expected to produce intermittent noise levels exceeding 60 dB L _{eq} .				
PUBLIC HEALTH AND SAFETY				
Impact PHS-1: Exposure of Residential Uses to EMFs. The project could result in the construction of residential structures within 150 feet of the existing 75-foot-wide and 100-foot-wide 230 kV easements traversing the project site, possibly exposing residents to electric and magnetic fields (EMFs).	S	Require a minimum 150-foot setback for residential structures from project site transmission line easements. In addition, require disclosure of potential EMF health risks to prospective residents of homes within 300 feet of transmission line easements.	County/ applicant (1, 2C)	LS
Impact PHS-2: Natural Gas Terminal and Compressor Station. If the project does not provide an adequate safety buffer between the existing PG&E gas terminal and compressor station and proposed adjacent and nearby commercial and residential land uses, the explosion potential at that facility would pose a risk to project occupants.	S	Require a buffer around the gas terminal and compressor station to protect public health and safety in the event of a natural gas-related explosion. The size of the buffer should be negotiated through consultation with PG&E to provide adequate protection from noise and safety impacts (see <i>Mitigation N-4</i>). Require disclosure of gas terminal and compressor station hazards to all commercial occupants and residents within 1,000 feet of the gas terminal and compressor station.	County/ applicant/ PG&E (1, 2C, 2D)	LS

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Impact PHS-3: Natural Gas Pipeline Impacts. Natural gas pipeline easement #4 extends through the proposed middle school site (Planning Area #18) and could subject school occupants to hazards.	S	Either (a) relocate the northern section of natural gas pipeline easement #4 off of the middle school site, with relocation costs to PG&E borne by the applicant; or (b) modify the boundaries of the middle school site so that they do not encompass the natural gas pipeline easement.	County/ applicant (1)	LS
Impact PHS-4: Exposure of Project Occupants to Mercury in the Adjacent Marsh Creek Reservoir. Project occupants may be exposed to mercury in Marsh Creek Reservoir water and sediment, if occupants enter the reservoir site for recreation or other purposes.	S	^r Prior to initiating construction of the first ^r development phase, require the project applicant to work with the County to provide a secure fence around the Marsh Creek Reservoir to discourage public access until clean-up has been completed and mercury levels are found to be at 0.5 ppm or lower. The fence shall include signage at regular intervals warning of the mercury contamination health hazards associated with swimming and/or fishing in the reservoir.	County/ applicant (1)	LS
Impact PHS-5: Health Hazards Due to Fishing in the Adjacent Marsh Creek Reservoir. The project's proximity to Marsh Creek Reservoir may encourage project occupants to fish in the reservoir. Due to the potential presence of mercury in the tissue of fish that inhabit the reservoir, catching and eating fish from the reservoir may pose a health hazard.	S	Until all mercury levels in the Marsh Creek Reservoir are found to conform to CDHS standards, implement <i>Mitigation PHS-4</i> above to prevent project occupants from fishing in the reservoir.	County/ applicant (1)	LS

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and Marsh Creek extends from Marsh Creek Road north into the center of the site (see Figure 4). The northeast portion of the site contains an outcrop belt of Domengine Sandstone, a deposit that was mined for silica sand in years past.

(See further discussion of the project physical characteristics in sections IV.D, Soils and Geology; IV.E, Drainage, Flood Control, and Water Quality; IV.G, Biological Resources; IV.H, Mineral Resources; IV.I, Cultural Resources; and IV.J, Visual Factors.)

- r b. Existing Land Uses. The site is currently used primarily for cattle grazing. A 217-acre producing apple orchard is located along the Walnut Boulevard edge of the site (see Figures 3 and 4). Two ranch homes and accessory structures are located on the site near the John Marsh Home State Park site off of Marsh Creek Road (see section 4.c below). The project site is bisected by overhead electrical transmission lines, underground gas pipelines, and other easements (see Figure 4).

(See further discussion of existing project site land uses in sections IV.A, Land Use; IV.B, Agriculture; IV.F, Public Facilities and Services; IV.H, Mineral Resources; and IV.M, Public Health and Safety.)

c. Existing Road Access. As shown on Figure 5, the site is bordered or traversed by the following rural County roads: (1) *Marsh Creek Road*, which bisects the project site and provides access to the cities of Clayton and Brentwood; (2) *Walnut Boulevard*, which flanks the orchard area along the eastern edge of the site; (3) *Camino Diablo*, which forms the southern boundary of the site; (4) *Deer Valley Road*, which traverses the northwesternmost corner of the site; (5) *Concord Avenue*, located on the northern edge of the site; and (6) *Briones Valley Road*, also located on the northern edge of the site, a dedicated County road that is gated, unpaved, and closed to public use at this time.

(See further discussion of existing road access characteristics in section IV.C, Transportation.)

4. Parcelization

Figure 5 shows the legal lots comprising the project site, plus the three properties listed below that are partially or entirely enclosed by the Cowell Ranch project site but under separate ownership. These three properties are not a part of the proposed Cowell Ranch development plan, but are included in a related County-designated general plan amendment study area (see further discussion under subsection B.1, Proposed Project, "Project Applications," below):

- r a. PG&E Gas Terminal and Compressor Station. A PG&E gas terminal and compressor station is located on an approximately 15-acre parcel on Concord Avenue near the north end of the site, surrounded on three sides by the project site boundary. This facility directs, regulates, and boosts the interregional flow of natural gas between central and northern California.

- *Public/Semi-Public (PS)*
- *Parks and Recreation (PR)*
- *Open Space (OS)*

As part of the general plan amendment application, the applicant has also requested a modification to the *Urban Limit Line (ULL)*. Figure 7 illustrates the existing and proposed ULL. As shown by Figure 7, the north and east portions of the site, representing approximately 2,077 acres or 49 percent of the 4,277-acre property, are located within the existing ULL. Of the 1,269 acres proposed for urban uses by the project, approximately 262 acres are located outside the existing ULL. The project proposes a redrawing of the ULL to include these 262 acres within the ULL and to exclude two areas (totalling 262 acres) elsewhere on the site, so that the project would result in no net change in the total land area within the ULL. This change would require compliance with required findings and other provisions set forth in Measure C-1990.

In addition to those applicant-proposed actions, Contra Costa County has expanded the scope of the general plan amendment request to include a concurrent review of current general plan provisions for the following adjoining properties (see Figure 5): (1) the 15-acre PG&E gas terminal and compressor station property, located on Concord Avenue near the north end of the site, (currently designated *Agricultural Lands (AL)*; proposed by the County to be designated *Public/Semi-Public (PS)* to reflect the existing use of the site); (2) the 100-acre Marsh Creek Reservoir property, surrounded by the project site (currently designated *Parks and Recreation (PR)*; no change proposed by County); and (3) the 15-acre John Marsh Home State Park Site (currently designated *Parks and Recreation (PR)*; no change proposed by County). These existing (or, in the case of the PG&E property, proposed) land use designations would be reflected on the general plan amendment map for the project, if the project is approved by the County.

b. Rezoning. The applicant has requested rezoning of the 2,077-acre portion of the project site located within the ULL from A-4 (*Agricultural Preserve District*) to P-1 (*Planned Unit District*), plus related entitlements, including preliminary development plan approval, to permit development of a planned community. The applicant has also requested rezoning of the remaining 2,200 acres of the project site located outside the proposed *Urban Limit Line* from A-4 to A-2 (*General Agricultural District*), to reflect the fact that the agricultural preserve (i.e., Williamson Act contract) status of these lands expired on February 29, 1996. The applicant intends either to dedicate the area proposed for A-2 zoning to a public agency or conservation organization, or to retain the lands as permanent open space in private ownership through dedication of development rights to the County.

c. Development Agreement. The applicant has filed an application with the County for a development agreement pursuant to Government Code section 65864 et seq. The development agreement is designed to establish procedures governing, and vest the

(1) *North Village*. The North Village (Planning Areas 19-28 on Figure 8), located north of Marsh Creek and northeast of the John Marsh Home State Park site, would have access from Marsh Creek Road and the proposed major thoroughfare that would border the west side of the village. The North Village would encompass approximately 137.6 acres (net of roadway), and would consist of commercial offices, retail commercial uses, higher density housing, and public facilities. The village would contain up to 873 dwelling units (up to 229 multi-family medium density units, and up to 644 multi-family high density units). The village would also contain 455,856 square feet of building floor area for community commercial uses, as well as 5.0 acres of public facility uses, a 2.3-acre neighborhood park/village green, and a 47.2-acre community park with playfields located at the eastern and southern edges of the village and extending from the PG&E gas terminal and compressor station southward along the west side of the SR 4 bypass to Marsh Creek and Marsh Creek Dam.

(2) *East Village*. The East Village (Planning Areas 39-51 and 53-60 on Figure 8) would be located at the southeastern portion of the site, bounded by the proposed SR 4 Bypass right-of-way to the north, Camino Diablo to the south, Walnut Boulevard to the east and foothills to the west. The East Village would encompass 239.2 acres (net of roadway), and would contain up to 1,424 dwelling units (up to 30 single-family medium density units, up to 598 single-family high density detached units, up to 431 multi-family low density attached and detached units, and up to 365 multi-family high density attached units), located in the northwest portion of the village. The village would also contain 242,411 square feet of community commercial floor area, two neighborhood parks and a village green totalling 12.3 acres, and a ten-acre elementary school site.

(3) *North Hills*. The North Hills subarea (Planning Areas 1-18 and 29-30 on Figure 8) would be located northwest of the North Village, close to the northern and western boundaries of the project site. The proposed SR 4 Bypass would adjoin the area's eastern boundary, and the southern boundary would be defined by an east-west trending ridgeline. The subarea would encompass approximately 363.9 acres and would contain up to 1,376 dwelling units (up to 65 single-family low density detached houses, up to 225 single-family medium density detached houses, up to 722 single-family high density detached houses, and up to 364 multi-family low density, attached and detached units). The subarea would also contain a 23.2-acre neighborhood park, a ten-acre elementary school site, a 26-acre middle school site and two water tanks.

(4) *East Hills*. The East Hills subarea (Planning Areas 52 and 61 on Figure 8) would encompass approximately 76.8 acres between the proposed East Village and the existing Marsh Creek Road right-of-way. A portion of this area would have frontage on Camino Diablo. The East Hills subarea would contain up to 444 dwelling units (up to 110 single-family medium density detached houses, and up to 334 single-family high density detached houses).

(4) *Project Entrances.* The project would have four major roadway access points (see Figure 9): two entrances along Walnut Boulevard (one at the proposed business park and one at the connection to the proposed major thoroughfare), one entrance from the Marsh Creek Road/SR 4 intersection, and one overpass entrance at the collector street connection to the Blackhawk-Nunn development. Two smaller entrances would be located at Camino Diablo. Project entrance landscaping is proposed to be maintained by a Lighting and Landscape Maintenance District, or similar maintenance district.

(5) *Transit.* The North and East Villages would serve as the focal points for transit service within the project site (along the new major thoroughfare) to Brentwood and regional transportation corridors. Shuttle buses or demand-responsive vans would carry passengers from Cowell Ranch to downtown Brentwood, BART terminal stations, and major employment centers in the surrounding area.

Opportunities exist to locate a transit center near the East Village, adjacent to the SR 4 Bypass. If such a transit center is needed, it may be possible to locate the facility in the proposed East Creekside business park area.

(6) *Trails and Paths.* The project would provide a network of bike paths, sidewalks, and trails, as follows:

- **Bike Paths.** As shown on Figure 10, arterial streets would include a ten-foot-wide bike path and a landscaped edge within the proposed right-of-way. As shown on Figure 11, collector streets connecting the villages would include a four-foot-wide bike path within the paved roadway section. These collector loops would connect residential neighborhoods, schools and parks to the villages, and would also provide connections to open space areas.
- **Sidewalks.** Arterials, collectors, and some local streets would include sidewalks. To preserve a rural character, those local streets serving larger-lot (i.e., low- and medium-density single-family) residential neighborhoods would not include curb, gutter or sidewalk. Street layouts within the villages would be designed so that most land uses would be accessible to pedestrians.
- **Trails.** The project proposes a series of trails that would link Cowell Ranch to the 3,008 acres of open space surrounding the urbanized portion of the site (see Figure 8). In addition to linking the various subareas of the project, the trail system would provide connections west to the Briones Valley and south to Camino Diablo via the Marsh Creek Road right-of-way. South of the Marsh Creek Reservoir, Marsh Creek Road would be terminated and the right-of-way would be converted from a County roadway to a pedestrian/bicycle/equestrian trail in order to implement East Bay Regional Park District plans for a Marsh Creek Trail connection to Round Valley Regional Park and Morgan Territory Regional Preserve. An associated trailhead and parking area are proposed, with the exact location yet to be determined. The Marsh Creek Road right-of-way would also be maintained for emergency vehicle access.

(2) *Development/Design Standards.* Section 4.0 of the applicant-prepared development standards booklet sets forth development/design standards for project and community commercial residential areas, as well as for the college, business park, and parks and open space areas. The standards address such issues such as building orientation, height, and massing; required parking; treatment of subarea entryways; landscaping; and other features.

(3) *Urban Design Requirements.* Section 5.0 of the applicant-prepared development standards booklet sets forth requirements for project gateways and entries, focal points, and streetscapes. The requirements address features such as landscaping, pedestrian connections, walls, lighting, paving, and lighting.

(4) *Zoning Regulations.* Section 6.0 of the development standards booklet sets forth development requirements for each of the residential land use categories (Single-Family Residential Low, Medium, and High; Multi-Family Residential Low, Medium, and High), as well as for the Business Park land use category. For the residential categories, the requirements address permitted and conditionally permitted uses, minimum site area and lot dimensions, required parking, minimum building setbacks, required private open space, maximum building height, garage location, front yard fencing, and other development standards. For the Business Park category, the requirements address permitted and conditionally permitted uses and minimum building setbacks.

i. Anticipated Project Population and Employment Characteristics. The following data on anticipated project population and employment characteristics are based on the project description materials submitted by the applicant and form one of the primary bases for the evaluation of project land use, transportation, public services and other impacts in this EIR.

(1) *Population and Employed Residents.* As indicated in Table 6, the project is expected to have a resident population of approximately 13,076 people at buildout. Of this total, approximately 7,849 residents are expected to be employed.

(2) *Employment.* As indicated in Table 7, the non-residential components of the project (i.e., business park, commercial development, community college, schools, other public facilities) are expected to accommodate a total of 6,628 onsite jobs at buildout.

C. INTENDED USES OF THE EIR

1. Overview

Contra Costa County is the Lead Agency for the EIR on the proposed Cowell Ranch project. This Master EIR reviews the project described above, which consists of a general plan amendment (including *Urban Limit Line* modification), rezoning to *P-1* and *A-2*, and

preliminary development plan and development agreement approvals. These government actions would establish the legislative policies guiding future urban development on the project site. Approval of these actions would not constitute final development approval, but would allow the property owner to move forward with development plans.

The purpose of this Master EIR is to assess the potential environmental impacts of all aspects of the proposed entitlements. The EIR assumes that all future approvals will be granted and that full development will occur in a manner consistent with the currently proposed project. This assumption ensures that the fullest environmental review is achieved as early as possible in the process, a major goal of CEQA, and not deferred until later approvals.

As explained in section I.B.1 of this EIR, this document is intended to be used as a Master EIR, which means that it will serve as the foundational environmental review document for any subsequent projects that will follow the policies of the general plan amendment, the requirements of the rezone, preliminary development plan and the development agreement. Future specific development projects consistent with the general plan amendment, rezone, preliminary development plan and development agreement will be subsequent projects or activities that will be subject to several discretionary approvals by governmental agencies. To the extent that the Master EIR has adequately assessed and mitigated the environmental consequences of these future activities, additional environmental review may be unnecessary or limited. However, where it was not feasible at this conceptual level to adequately assess and mitigate the environmental consequences of these future activities, the Master EIR process contemplates that subsequent environmental review will be required prior to any discretionary approval of a subsequent project.

The Master EIR is intended to encourage as much information as possible at this planning phase in order to eliminate redundant subsequent environmental review. The Master EIR has adequately analyzed the scope of the present project (general plan amendment, rezoning, preliminary development plan and development agreement). In addition, the Master EIR has assessed the environmental consequences of activities as can feasibly be assessed at this time in the process. There are future activities that cannot be feasibly analyzed at this time but this inability does not prevent the County from approving the present project applications. These future activities will be subject to additional environmental review, if the Master EIR was unable to address the environmental consequences of the subsequent activities.

For each subsequent project proposal, the County or other governmental entities, acting as reviewing agencies, will determine, through the CEQA-required initial study process, whether this Master EIR adequately addresses potential impacts of the subsequent project, or whether additional environmental review must be conducted.

2. Required Jurisdictional Approvals

The following anticipated jurisdictional approvals and permits are necessary to implement the project. This Master EIR addresses the potential environmental impacts associated with these required jurisdictional approvals.

a. Contra Costa County. The proposed project would require (1) EIR certification, (2) a general plan amendment to incorporate the land use designations shown on Figure 6, and to adjust the County-designated *Urban Limit Line* as shown on Figure 7; (2) rezoning of a portion of the site to *P-1* along with preliminary development plan approval, (4) rezoning of a portion of the site to *A-2*, and (5) development agreement approval. Implementation of the project would also eventually require approval of final development plans, subdivision maps (vesting tentative maps and final maps), lot line adjustments, and minor parcel maps; financing districts; land use permits to allow the golf course, churches and other uses; architectural and site plan review for individual developments; grading permits; building permits; infrastructure improvement plans; and other approvals.

a. Contra Costa County LAFCO. The proposed project would require Contra Costa County Local Agency Formation Commission (LAFCO) approval of related sphere of influence and service district boundary changes. The project may also require LAFCO approval of possible

creation and/or financing of service districts and possible annexation (or phased annexation) to the City of Brentwood.

c. City of Brentwood. The proposed project, if annexed into the City of Brentwood, may require a pre-annexation/development agreement, and would require rezoning, annexation, and associated water, sewer, and other service system expansions approvals. The project may also require City approval of final development plans, subdivision maps, and other approvals to implement the project.

d. Other Environmental Permits and Agreements. The project would require additional permits and agreements from the following agencies:

- (1) *Contra Costa County Flood Control and Water Conservation District.* Any proposed onsite construction within the Contra Costa County Flood Control and Water Conservation District (CCCFC&WCD) right-of-way would require a flood control permit. Any proposed modification or improvement of existing onsite drainage facilities, whether human-made facilities or natural watercourses, would also require a CCCFC&WCD permit. The CCCFC&WCD would also review the project's proposed drainage facilities, as well as the planned extension of the Marsh Creek Trail in the vicinity of Marsh Creek Reservoir and along the banks of Marsh Creek. Any planned joint use of the Marsh Creek Reservoir right-of-way would require CCCFC&WCD approval.
- (2) *Regional Water Quality Control Board.* The project would require Regional Water Quality Control Board (RWQCB) approval of stormwater pollution prevention permits.
- (3) *State Department of Health.* The project would require approvals from the State Department of Health for any new sewer and/or water service districts.
- (4) *State Department of Fish and Game.* The project would require *Stream Bed Alteration Agreements* and associated permits and agreements from the California Department of Fish and Game for all project activity within the site's stream beds which would alter the natural flow of the stream, significantly change its bed or bank, or utilize material from the stream bank.
- (5) *U.S. Army Corps of Engineers.* The project would require a Section 404 permit from the Army Corps of Engineers to fill any wetlands and jurisdictional waters of the United States under the federal Clean Water Act, plus associated permits or agreements.
- (6) *U.S. Fish and Wildlife Service.* The project may require an incidental take permit under the federal Endangered Species Act, and associated permits and agreements.

(2) *Landscape and Lighting District.* A landscape and lighting district could be created and made responsible for maintaining common area landscaping, adjacent landscape easements, fuel modification areas (for wildfire management), project identity signs and monuments, and other similar maintenance functions. Such maintenance areas may be established for the maintenance of street lighting and drainage facilities within the project which are not maintained by another district.

(3) *Geologic Hazard Abatement District.* A geological hazard abatement district could be established to provide a mechanism for funding any preventive maintenance or remedial work that might be required due to landslides or other designated geologic hazards within open space or graded areas of the project. The boundary of such a district(s) would be based on the area to be developed and a determination of how open space lands are to be handled by the project.

(3) *Financing Districts.* One or more financing mechanisms may also need to be established to ensure timely completion and continued maintenance of public improvements. Numerous financing district and other financing mechanisms are possible, including lighting and landscaping districts, Mello-Roos districts, assessment districts, county service areas, community service districts, etc.

d. Final Development Plans. Final development plans will be required for future development. It is likely that multiple final development plans will be provided for various future individual developments and ownerships within the project site.

e. Tentative Subdivision or Parcel Map. A tentative subdivision or parcel map will also be required for every subdivision of property within the project area. Many subdivision maps may be prepared for a single final development plan as each individual neighborhood is developed.

f. Lot Line Adjustments. Lot line adjustments may also be requested in the future to adjust property lines to facilitate the project and subdivisions.

g. Minor Subdivision Map. Prior to commencing detailed planning studies, the property may be subdivided, requiring approval of a minor subdivision map (for subdivisions of four or fewer parcels).

h. Land Use Permits. Land use permits may be required for the development of the golf course, churches and other permitted uses described in the proposed *P-1* zoning standards.

i. Infrastructure Improvement Plans. Infrastructure improvement plans would be submitted to the Contra Costa County Public Works Department for review and approval prior to the issuance of a final subdivision or similar entitlement for each phase of development. Plans for offsite flood control improvements developed in accordance with mitigation measures recommended in this Master EIR would be submitted to the Contra Costa County Flood Control and Water Conservation District for review and approval.

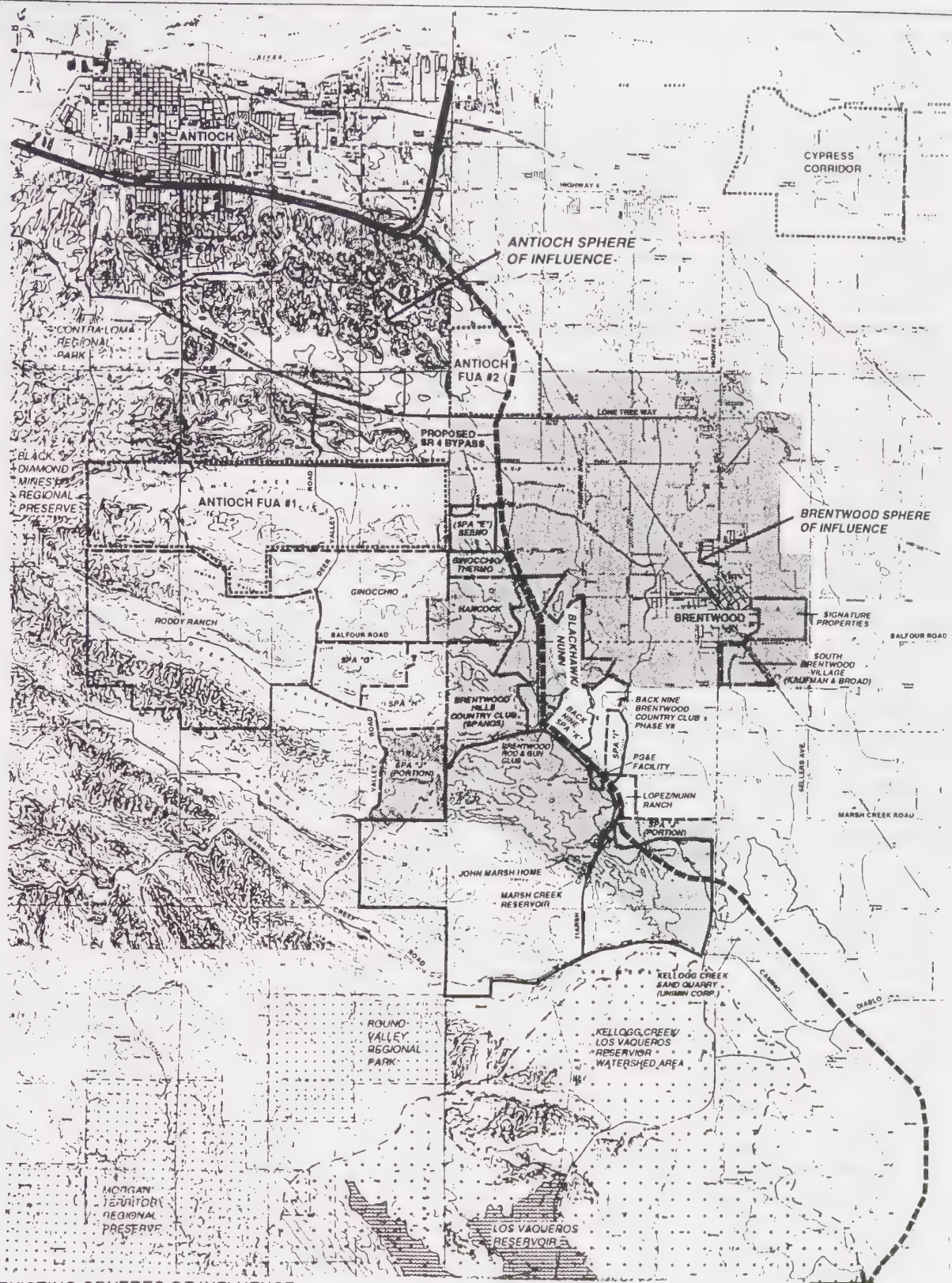
i. Pre-annexation/Development Agreement. The City of Brentwood may be requested to enter into a pre-annexation/development agreement.

Table 9 (cont.)

<u>Project</u>	<u>Location</u>	<u>Acreage</u>	<u>Development Capacity</u>
<i>Tassajara Valley Specific Plan</i> (Contra Costa County)	In south Central Contra Costa County adjacent to the Dougherty Valley Specific Plan area	6,000 (approx.)	Currently proposed for the development of approximately 5,340 homes and 52 acres of commercial development
<i>East Dublin Specific Plan</i> (City of Dublin)	In northeastern Alameda County adjacent to the Dougherty Valley Specific Plan boundary	3,050 (approx.)	Planned by the City of Dublin for development of up to approximately 13,930 homes and 800 acres of commercial use (approximately 26,380 potential new jobs)
<i>North Livermore General Plan area</i> (Alameda County)	In northeastern Alameda County approximately 15 miles south of the project site	12,689 (approx.)	Planned by Alameda County for development of up to approximately 12,385 homes and 590 acres of commercial development (approximately 13, 870 new jobs)

r SOURCE: Wagstaff and Associates based on review of related project EIRs, and communication with
r the staffs of the Contra Costa County Community Development Department, City of Pittsburg
r Community Development Department, City of Antioch Community Development Department, and San
r Joaquin Community Development Department.

NOTE: See Table 10 for newly completed, recently approved, or currently pending development in the Brentwood Planning Area.



EXISTING SPHERES OF INFLUENCE
(ANTIOCH AND BRENTWOOD, AUGUST, 1994)



Cowell Ranch Project EIR
Contra Costa County, CA

Figure 17
**LOCAL DEVELOPMENT AND
OPEN SPACE AREAS**

Table 10
NEWLY COMPLETED, RECENTLY APPROVED, OR CURRENTLY PENDING
DEVELOPMENT IN BRENTWOOD PLANNING AREA

Project #	Name	Acres	Non-Residential Square Feet	Units/ Type	Status*
r Sub. #8055	Hoffman	35.30	--	78 sf	A
r Sub. #8066	Nunn Gangwer	56.24	--	169 sf	A
r Sub. #7940	Brentwood Country Club	145.30	--	481 sf	A
r Sub. #8069	Bellecci	45.26	--	181 sf	A
r Sub. #6665	Bear Forest	12.50	--	80 sf	B
r Sub. #6888	Citation	42.40	--	152 sf	B
r Sub. #7975	McDonald	11.00	--	68 sf	B
r Sub. #7474	Chan	50.73	--	76 sf	B
r Sub. #7874	Gerry Properties	24.92	-	121 sf	B
r Sub. #7476	Rural California	15.00	--	65 sf	B
r Sub. #8048	Birchwood Estates	9.98	--	52 sf	B
r Sub. #7904	Catchings	5.00	--	18 sf	B
r Sub. #7637	Ospra	5.48	--	66 mf	B
r Sub. #7690	Spanos	576.70	--	1,031 sf/mf	B
r Sub. #8046	Meadows	14.52	--	71 sf	B
r Sub. #8017/ r 8022	Pulte	NA	--	77 sf	C
r Sub. #7882	Termo	98.40	--	278 sf	B
r Sub. #8033	Hasseltine/Best	114.20	--	442 sf	B
r Sub. #7943	Kaufman & Broad	1.10	--	6 sf	B
r Sub. #6811	Mission Peak Homes	NA	--	82 sf	C
r DR 96-1	Brentwood Park Apts.	NA	--	160 sf	C
r Sub. #6691	Garrow	11.0	--	24 sf	C
r Sub. #6848A	Nunn/Blackhawk	68.00	--	180 sf	C
r Sub. #7948, r 7995, 8011	Greystone	NA	--	291 sf	C
r CUP 95-2	Oregon Investors	NA	--	126 sf	C
r Sub. #7272	Farm Hill	13.00	--	26 sf	C
r Sub. #7798, r 7799, 8010, r 7605	Signature	NA	--	408 sf	C
r Sub. #7873	Brentwood Country Club	NA	--	29 sf	C
r Sub. #7349	Tamayo	13.00	--	24 sf	C
r Sub. #7816, r 7869, 7870, r 7871, 7872	Blackhawk	NA	--	452 sf	C
r Sub. #7705	Hancock	434.80	--	940 sf	C
r Sub. #7939	Brentwood Country Club	NA	--	511 sf	C
r Sub. #7642A	Braddock Logan	NA	--	50 sf	C
r Sub. #7642A, r 7872	Kiper	487.00	--	130 sf/mf	C
r Sub. #7703	Garrow	NA	--	27 sf	C
r Sub. #7432	Seeno	NA	--	96 sf	C
r Sub. #7864	Pulte	NA	--	42 sf	C
r Sub. #7059, r 7915	Pulte	25.20	--	88 sf	C
r Sub. #7433	Seeno	NA	--	61 sf	C
r Sub. #8009	Morrison	NA	--	78 sf	C

r = Indicates revised line; i.e., revision to Draft EIR made in response to public comment.

Table 10 (cont.)

r	Sub. #7944	Seeno	NA	--	34 sf	C
r	CUP 96-17	Parvizi Gas Station/Mini-Mart	1.00	16,570	--	A
r	DR 97-3	HPH Properties Office Building	2.50	10,080	--	A
r	CUP 97-7	Railroad Station Restaurant	1.70	8,225	--	A
r	DR 97-6	Garin Ranch Shopping Center	12.50	107,767	--	B
r	DR 97-7	HPH Office Building	0.99	12,750	--	B
r	DR 97-2	US Print	8.75	29,592	--	B
r	DR 96-8	A-1 Transmission	0.50	8,538	--	B
r	CUP 96-15	Montessori	2.52	5,878	--	B
r	CUP 96-18	Lone Tree Drive-In	0.60	2,526	--	B
r	CUP 97-3	Israel Restaurant	4.87	7,602	--	B
r	CUP 96-10	Ace Hardware	4.05	33,275	--	C
r	CUP 96-9	Shanks Chevron	1.02	3,624	--	C
r	Totals		2,358.05 acres	246,427 sq. ft.	7,371 units	

SOURCE: City of Brentwood, Summary of Residential, Commercial & Industrial Activity within the City of Brentwood as of October 1, 1997.

NA = Not Available; sf = single-family; mf = multi-family

*Status: A = Proposed; B = Approved; C = Under Construction or Recently Completed

woodland hillside open space. The Acquisition Area includes 444 acres of the 630-acre property on the south side of Camino Diablo. The Contra Costa Water District may acquire this 444-acre piece, which consists of 352 acres of watershed area and 92 acres of oak mitigation area, under condemnation action that is still pending.¹

(d) *State and Regional Parks and Open Space Areas.* Figures 16 and 17 show state and regional parks located within 10 miles of the project site, including:

- the 1,854-acre *Round Valley Regional Park* property, which adjoins the southwestern corner of the project site (currently with limited access and not developed as a park or open to the public);
- the 3,377-acre *Morgan Territory Regional Preserve*, approximately three miles southwest of the site (vehicular access via Marsh Creek Road and Morgan Territory Road is over ten driving miles away);
- the 3,906-acre *Black Diamond Mines Regional Preserve* and 776-acre *Contra Loma Regional Park*, approximately seven driving miles to the northwest via Deer Valley Road, Empire Mine Road, and Frederickson Lane; and
- the approximately 20,000-acre *Mt. Diablo State Park*, approximately 10 miles to the west on Marsh Creek Road.

r In addition, the East Bay Regional Park District (EBRPD) has established a trail through the vicinity and project site which would extend from the mouth of Marsh Creek at Big Break, r along Marsh Creek to the Round Valley Regional Park. This trail is officially known as the r *Round Valley to Big Break Trail*. Approximately six miles of this trail has been constructed r between Big Break and the City of Brentwood. Construction of the remaining portions is r currently at the planning stage.

More information regarding the status and use of these state and regional park and open space facilities is provided in EIR section IV.F, Public Services and Facilities.

(e) *East Contra Costa County Airport.* The East Contra Costa County Airport (aka Byron Airport) is located on Armstrong Road south of central Byron, approximately 7.5 driving miles southeast of the project site. The County-operated facility currently contains two runways and several portable aircraft hangers. Approximately 75 aircraft are currently based at the airport. The County is planning an expansion of the East Contra Costa County Airport to develop a full-service, general aviation facility designed ultimately to accommodate up to 250,000 aircraft operations annually and house up to 250 aircraft on the premises (see Table 9). Light r industrial uses are also planned. If employment-generating uses were developed on the r project site, this airport may provide "executive" air service to these uses.

¹Telephone conversation with Dennis Pisila, Contra Costa Water District, May 7, 1996.

d. Adjacent Land Uses

Existing and anticipated land uses that are either enclosed by or adjacent to the project site are shown on Figures 17 and 18 and described below.

- r (1) PG&E Gas Terminal and Compressor Station. A PG&E gas terminal and compressor station is located on an approximately 15-acre parcel on Concord Avenue near the north end of the site. The property is surrounded on three sides by the project site. The facility includes a compression plant that directs, regulates, and boosts the interregional flow of natural gas between central and northern California. The plant is staffed by PG&E operators 24 hours per day, and has been in operation since the mid-1950s. More detailed discussions of its operational characteristics and impact implications are included in sections IV.J (Visual Factors), IV.L (Noise), and IV.M (Public Health and Safety) of this EIR.
- (2) John Marsh Home State Park Site. The undeveloped *John Marsh Home State Park* site is located on approximately 15 acres of state-owned land in the middle of the project site, with vehicular access from Marsh Creek Road (see Figures 4 and 5 in section III of this EIR). The park includes the large, John Marsh "Stone House" (1856), a National Register-listed historic landmark that is in need of restoration and seismic retrofit. Due to the seismically unstable condition of the stone house and the lack of other improvements, the park is currently closed to the public. The State Parks Department currently has no adopted improvement plan for this property. The park and its historic significance are further described in sections IV.F.5 (Parks and Recreation) and IV.I (Cultural and Historic Resources) of this EIR.
- (3) Marsh Creek Reservoir. The Marsh Creek Reservoir and levee, a 3,600-to-4,000-acre-foot water storage facility owned and operated by the Contra Costa County Flood Control District (CCCFCD), is located on approximately 93 acres surrounded by the project site and adjacent to Marsh Creek (see Figure 17 and Figures 4 and 5 in section III of this EIR). The reservoir is impounded by a earthen dam across Marsh Creek and is currently used for flood control purposes only. As illustrated by Figures 4 and 5, the CCCFCD also maintains a reservoir-associated flood control easement over adjacent portions of the project site up to the 200-foot contour elevation, including a corridor along Marsh Creek Road.
- (4) Spanos Project (Brentwood Hills Country Club Subdivision). The Spanos property is a 751-acre site located on the north side of Briones Valley Road across from the project site (see Figure 17). As illustrated on Figure 19, the City of Brentwood has approved a mixed-use subdivision plan for the property (the Brentwood Hills Country Club) that provides for the eventual, phased development of 1,622 residential units, an 18-hole golf course and country club, a 54-acre employment center, and a 15-acre neighborhood shopping center. Spanos project land uses closest to the project site include the golf course and permanent open space areas (see Figure 19), including Dry Creek Reservoir.

The site also contains a 22.86-acre water pipeline right-of-way owned by the Contra Costa Water District (CCWD) that extends through the eastern portion of the project site (see Figure 4).¹

(6) Sand Mine. A silica sand mine is located in the northeastern portion of the project site over a Domengine Sandstone deposit (see Figure 4). The deposit consists of quartz sandstone with minor interbedded mudstone. The extent of this deposit is described in EIR sections IV.D, Soils and Geology, and IV.H, Mineral Resources.

r 2. RELEVANT ENVIRONMENTAL POLICIES AND GUIDELINES

a. Contra Costa County General Plan

r Adopted Contra Costa County General Plan² policies and provisions regarding land use are as follows:

(1) Land Use Designations. As described in chapter III, Project Description, of this EIR, the Contra Costa County General Plan Land Use Map currently designates the project site as *Agricultural Lands (AL)*, with a small area in the northeast edge of the project site (containing the southern side of the Kellogg Creek side channel) designated as *Agricultural Core*. This designation is applied to lands that the County wants to preserve and protect for production of food, fiber, and plant materials. The maximum allowable residential density on lands designated *AL* is one dwelling unit per five acres.

(2) 65/35 Land Preservation Standard. The *65/35 Land Preservation Standard*, incorporated into the General Plan through voter passage of Measure C in 1990, requires that no more than 35 percent of the land in the county (including incorporated areas) contain urban development, and that the remaining 65 percent be preserved as agricultural land, open space, wetlands, parks, and/or other non-urban uses.

(3) Urban Limit Line. The General Plan-designated *Urban Limit Line (ULL)* establishes a boundary beyond which no large-scale urban development may be considered within the

¹The 22.86-acre pipeline right-of-way was acquired by the Contra Costa Water District (CCWD) after project documentation had been prepared by the applicant and submitted to the County. Subtracting the pipeline right-of-way from the 4,276.89-acre project site area shown in the project documentation, the actual project site area is 4,254.03 acres. This 22.86-acre difference between the assumed and actual project site acreage is considered minor for purposes of this Master EIR-level review.

²County of Contra Costa, Contra Costa County General Plan 1995-2010, adopted by the Contra Costa County Board of Supervisors on July 23, 1996. This "re-consolidated" general plan includes the amendments made to the previous general plan since its adoption in January 1991.

- *Urban development in the future shall take place within the Urban Limit Line and areas designated by this plan for urban growth. (Conservation Element, Policy 8-31, page 8-41)*
- *The visual identities of urban communities shall be preserved through the maintenance of existing open space areas between cities and/or communities. (Open Space Element, Policy 9-5, page 9-4)*

b. Conditions for a 21st Century Community

Contra Costa County's Conditions for a 21st Century Community, a set of growth management concepts adopted by the Board of Supervisors, contains the following principles that relate to land use. (These "Conditions" are intended for County Planning Commission and Board of Supervisors consideration, but do not constitute adopted plans or policies):

- *Provide a community that will be developed in accordance with growth management, transportation, and other service and subregional standards. (Principle 8)*
- *Provide within new communities, a mixture of land uses that afford convenient access to a variety of activities while reducing dependence on the automobile. (Principle 10)*
- *Provide for a strong, affordable, single family and multiple family housing program for a wide range of household income levels. (Affordable Housing section, Policy 1)*

c. Principles and Guidelines for Cowell Ranch

The Principles and Guidelines for Cowell Ranch document adopted by the Contra Costa County Board of Supervisors contains the following guidelines that relate to land use. (These guidelines are intended for County Planning Commission and Board of Supervisors consideration, but do not constitute adopted plans or policies):

- *A substantial portion of the Cowell Ranch should be retained for open space, parks, agricultural, recreational, and rural residential uses. (Guideline 1.a)*
- *Cowell Ranch should attain a true sense of place for those who choose to live, work, shop, or play there. (Guideline 2.a)*
- *The planning and development of Cowell Ranch should be based on high quality environmental and architectural standards that respect and enhance the semi-rural and village character of Brentwood. (Guideline 2.c)*
- *Cowell Ranch should be planned as a mixed-use community with a diversity of housing styles, types, sizes, and price ranges; sufficient land for employment to accommodate a jobs/housing balance; retail and commercial uses that address the daily needs of its residents and visitors; and adequate schools, parks, and public facilities to support the resident population. (Guideline 3.a)*

- *Development of Cowell Ranch for urban uses should occur inside the Urban Limit Line. Development of land outside the Urban Limit Line should be limited to non-urban uses and should avoid prime agricultural land. (Guideline 5.a)*
- *The Development Plan for Cowell Ranch should respect existing open space, growth management, agricultural, and hillside protection policies. (Guideline 5.b)*

- The area should be annexed to the City and should not be developed if it is to remain under the County's jurisdiction.

(2) General Plan Policies. The Brentwood General Plan contains the following pertinent policies regarding land use:

- *Promote a jobs/housing balance of 1:1 to encourage community self-sufficiency and reduce commute trips and associated air pollution.* (Land Use Element, Policy 1.1.5, page II.1-8)
- *Support Downtown as the community's commercial, civic and cultural focus.* (Land Use Element, Policy 3.1, page II.1-10)
- *Minimize industrial development impacts on adjacent land.* (Land Use Element, Policy 4.1, page II.1-10)
- *Create strong transitions between the City of Brentwood and neighboring communities. Within Brentwood create major activity centers or nodes with intense development whose intensity decreases as you travel out of the node.* (Community Design Element, Policy 3.3, page II.3-8)
- *Minimize conflicts between commercial and industrial uses and adjacent residential and agricultural land uses.* (Economic Development Element, Policy 3.2, page II.5-7)
- *Encourage new development in the downtown and carefully consider the impacts of new commercial development (outside of the downtown) on the viability of the downtown.* (Economic Development Element, Policy 5.3, page 11.5-9)

e. Regional Policies

r (1) Land Use. The Association of Bay Area Governments (ABAG) does not have jurisdiction
r over the project; however, its policies warrant consideration with respect to the Cowell Ranch
r project. The most recent regional land use policy document prepared by the Association of
Bay Area Governments (ABAG), entitled A Proposed Land Use Policy Framework for the San
Francisco Bay Area and adopted by the ABAG Executive Board in July 1990, contains the
following pertinent policies:

- *Direct urban growth where regional infrastructure capacity, such as freeway, transit, water, solid waste disposal and sewage treatment is available or committed, and where natural resources will not be overburdened.*
- *Encourage development patterns and policies that discourage long distance automobile commuting and increase resident access to employment, shopping, and recreation by transit or non-auto means.*
- *Establish firm growth boundaries for the urban areas of the Bay Area. Direct and permit urban development only within these growth boundaries.*
- *Encourage the provision of housing opportunities at all levels.*

would extend the Brentwood urbanization pattern to the northern boundary of the project site. Combined with the proposed project, these developments would reduce the wide expanse of open space that now exists between the southern edge of the current Brentwood urban area and the northern edge of Livermore in Alameda County. These Brentwood area projects, in combination with other recently approved and currently pending large-scale development projects in the subregion--e.g., in Pittsburg, Antioch, Mountain House, East Dublin, North Livermore (see Table 9)--would in turn contribute to a substantial loss of open space at the subregional level. This trend could conflict with Policy 9.5 of the Contra Costa County General Plan Open Space Element, which states that *"the visual identities of urban communities shall be preserved through the maintenance of existing open space areas between cities and/or communities."* This level of development also has the potential to conflict with Policy 3.8 of the Contra Costa County General Plan Land Use Element, which states that *"in accommodating new development, preference shall generally be given to vacant or under-used sites within urbanized areas, which have necessary utilities installed with available remaining capacity, before undeveloped suburban lands are utilized."*

The loss of open space due to the project would also result in impacts on other regional and subregional conditions and resources, including agriculture, transportation, water quality, biological resources, visual factors, and air quality. These impacts are described in subsequent sections of this EIR.

Mitigation LU-1: Because open space cannot be feasibly created, no mitigation is available and the project-related net loss in open space would represent a ***significant, unavoidable environmental impact*** of the project as proposed.

As mitigation for the project's open space impacts, the applicant proposes that the 3,008 acres of remaining open space within the project site be either (1) dedicated to a public agency, (2) dedicated to a conservation organization, or (3) retained in private ownership with deeded development rights granted to the County. These *Open Space*-designated areas would encompass major ridgelines, hillsides, wetlands, and riparian habitat, as well as approximately 85 acres that are proposed to be developed with an 18-hole golf course within and around the Golf Course Residential subarea. Of the 3,008 acres of permanent open space land, 808 acres would be within the proposed realignment of the *Urban Limit Line*. As illustrated on Figures 6 and 16, preservation of these open space lands would have a beneficial impact by extending the permanent open space holding currently represented by the Los Vaqueros Watershed Acquisition Area north, into the Briones Valley portion of the project site. In addition, the project would provide right-of-way through the project site for the *Round Valley to Big Break Trail* planned by the East Bay Regional Park District, as well as trail connections west to the Briones Valley and to other portions of the project site. These beneficial project aspects would partially offset the open space impact of the project, but not to a less-than-significant level. (Note: The City of Brentwood General Plan EIR also

r concludes that the loss of open space due to south Brentwood planning area urbanization
r would constitute a significant unavoidable impact.)

Impact LU-3: Impacts on Regional Housing Needs. If the project fails to meet the affordability needs of a range of households and income levels, it could be unsuccessful in complying with regional housing need determinations. This would represent a ***potentially significant adverse impact*** (see Criterion #1 under "3. Significance Criteria" above).

ABAG's current (January 1989) Housing Needs Determinations document does not project housing needs beyond 1995, and construction of the proposed Cowell Ranch project would not begin until after 2000. According to ABAG,¹ it is not anticipated that the next housing needs determinations will be published until 1997. Therefore, the number of units that the project should provide to meet the County's or City's fair share of regional housing needs for the period beyond 1995 is undetermined. However, both the Contra Costa County General Plan and the Brentwood General Plan contain policies addressing the need to increase the supply of housing suitable for a range of incomes and populations.

The project could be expected to have a beneficial impact on the local, countywide and regional housing supply by broadening the type (and potentially the affordability) of housing available in the East County area. In addition, the project would provide for both residential and non-residential development, which would establish a general opportunity for balancing housing growth with concurrent local jobs growth and growth in associated retail and service commercial development, as called for in the Brentwood General Plan.

The project as currently conceived would provide a wide range of housing types and, presumably, corresponding affordability levels. The comparatively diverse range of housing types proposed by the project, including the substantial provision for townhouses, duplexes, fourplexes, and multi-family units (67 percent of the 5,226 maximum allowable project unit total) indicate that the project would include a relatively high portion of units with lower construction costs, which could, presumably, translate into reduced home prices.

The project as currently proposed, however, does not provide a specific means for attaining a broad range of housing opportunities (i.e., density bonuses, fee waivers, flexible zoning mechanisms, and other incentives). Without specific measures to ensure that the diversity of project

¹Janet McBride, Senior Planner, ABAG, personal communication.

r housing types results in an appropriate range of housing prices, the substantial project
r housing stock addition could fail to meet the affordability needs of a range of households and
r income levels, and could be unsuccessful in providing strong housing support for the
r employment components of the project, and in complying with County and City of Brentwood
policies regarding adequate housing opportunities. Such a deficiency could also prevent the
project from achieving a desirable relationship ("linkage") between local housing and jobs (see
further discussion under *Impact LU-12* below).

Mitigation LU-3: Require the project applicant to submit a *Project Housing Strategy* that specifies project housing affordability goals, and an associated *Housing Mix and Affordability Monitoring Program* that evaluates progress in meeting affordability goals. This measure would reduce the impact to a ***less-than-significant level***.

(a) *Project Housing Strategy*. Require the applicant to prepare a *Project Housing Strategy* for review and approval by the County (or by the City of Brentwood Housing Coordinator, if the project site is to be annexed to the City of Brentwood) that specifies the affordability levels associated with the mix of proposed project housing types. An integral part of the *Project Housing Strategy* should be to incorporate measures that encourage provision of housing types and cost ranges appropriate for people employed at the project. The strategy should include the following components:

- The post-1995 housing affordability needs of the Brentwood area as defined by the next ABAG Housing Needs Determinations, when they become available.
- Measures to implement Principle 5.c of the Board of Supervisors' Principles and Guidelines for Cowell Ranch, which recommends using "...density bonuses, fee waivers, flexible zoning mechanisms, and other incentives."
- Fair share housing responsibilities and mechanisms that will be incorporated into future development plans for individual project properties.

(b) *Housing Mix and Affordability Monitoring Program*. Require the project applicant or subsequent project developers to submit an annual housing report to the County (or to the City of Brentwood, if the project site is to be annexed to the City) to provide a basis of evaluating whether the *Project Housing Strategy* housing type and affordability goals are being met. The result of these annual reports should be considered in the review and approval of future individual project subdivision plans.

b. Impacts on Brentwood Planning Area

Impact LU-4: Substantial Change in Physical Arrangement of Brentwood

Community. The project, as a mixed use, master planned development offering a range of housing and employment opportunities, would be generally consistent with the Brentwood General Plan (SPA "J") land use policies for the site, but nevertheless could substantially alter the existing physical arrangement of Brentwood. This change would represent a *potentially significant impact*.

The project site is located within Special Planning Area J (SPA "J") designated by the City of Brentwood General Plan. SPA "J" contains 5,500 acres, including the 4,277-acre project site. The "policy direction" described in the City's general plan for SPA "J" includes development of a balanced, mixed use, master planned development that offers a range of housing and employment opportunities along with open space, schools, parks and recreational facilities, commercial activities, and appropriate civic uses. In addition, the plan calls for the development of the site to be compact in order to encourage pedestrian and transit use with proximity to jobs, shopping, and community facilities such as schools, parks, and day care centers. The project would be consistent with this basic Brentwood land use policy in that it would establish a mixed use, master planned community containing housing, shopping, jobs, and civic facilities adjacent to the southwestern city limits of the City of Brentwood.

The Project as a Distinct Community. Due to its large size, village center orientation (two central, higher density village areas surrounded by lower density residential neighborhoods) and substantial commercial/employment/institutional components, the project would have the potential to be viewed as a distinct community from the remainder of Brentwood. The addition of this distinct, self-contained community, together with other approved or pending residential and commercial development in the project vicinity, could substantially alter Brentwood's existing physical arrangement, which currently consists primarily of single-family residential neighborhoods with commercial development concentrated downtown in a traditional central business district.¹ The following factors could contribute:

- **Large Size.** At buildout (by the year 2026), the project would provide 5,226 dwelling units, representing approximately 116 percent of the current (1995) total of 4,490 households in the Brentwood Sphere of Influence.² Combined with the 5,511 dwelling units newly completed, recently approved, or currently pending in Brentwood (see Table

¹City of Brentwood, Brentwood General Plan, 1993-2010, *Land Use Element*, page II.1-1.

²Association of Bay Area Governments, Projections 96, page 149.

10), the project and cumulative development would represent approximately 239 percent of the community's current dwelling unit total. Buildout of project-designated commercial/business land use components (122 acres, or 1,856,963 square feet) would represent approximately 232 percent of the existing developed commercial and industrial area in the Brentwood city limits (800,622 square feet¹); buildout of this project total plus the other 57,309 square feet of recently approved or pending commercial/office development in Brentwood (see Table 10) would cumulatively represent approximately 239 percent of the community's current commercial/business floor area total.

- **Inward Orientation--Substantial Commercial/Employment/Institutional Uses.** The project layout is oriented inward; the plan includes two higher density, mixed-use, village center "cores" (the North Village and the East Village) surrounded by lower density residential neighborhoods. The two "village centers" would contain approximately 698,267 square feet of commercial floor space, as well as 1,158,696 square feet of business park floor space, a community college, two elementary schools, one middle school, and sites for various other public facilities (e.g., fire station, library). The two village centers and adjoining employment and institutional uses have the potential to become strong social focuses and community identify elements within the project, and possibly within the larger community, due to the proposed mix of uses, park space focal points (i.e., "village greens"), and pedestrian scale. While establishment of commercial and other employment-generating uses in conjunction with residential uses offers potential environmental and other benefits (e.g., reduced automobile travel and air emissions if project residents also work and/or shop onsite), the large concentration of non-residential uses on the project site would also have the potential to alter Brentwood's existing configuration of residential neighborhoods centered around a traditional central business district. The proposed commercial uses, in particular, may compete with downtown Brentwood by offering similar shopping opportunities and possibly other community activities; this issue is addressed under *Impact LU-5* below.
- **Possible Development Without Annexation to Brentwood.** While it is anticipated that the project site would be annexed to the City of Brentwood prior to any project development, annexation is not included as part of the current project applications. If the project were to remain in unincorporated Contra Costa County, this factor could also contribute to the perception of the project as a distinct, self-sustaining community adjacent to Brentwood, rather than as an integral extension of Brentwood.

¹Rochelle Hoffner, Planning Intern, City of Brentwood; personal communication, July 31, 1996.

Mitigation LU-4: Since the project is within the designated planning area of the Brentwood General Plan, County decision-making on the project development plan and the relationship of these components to the existing and planned land use pattern of Brentwood to the north shall include consultation with the City of Brentwood. The objectives of the consultation shall be to ensure project coordination with City General Plan policies pertaining to development along the State Route 4 Bypass and to provide an integral relationship between the project and the adjacent Brentwood community. This measure would reduce this impact to a *less-than-significant level*.

The basic project objectives include the following:

- **Principle 3.** *Cowell Ranch should be designed for a balance of uses that would work together to support broad human needs as a largely self-contained community within the City of Brentwood.*
- **Principle 4.** *Development of Cowell Ranch should improve the quality of life for local residents while enhancing the economic base for local government.*

These objectives imply that the project should contain commercial and other employment-generating uses in order to achieve a balance of residential and non-residential uses and to generate sales tax and other revenues for local government. However, Principle 3 does state that the project should be designed "*as a largely self-contained community within the City of Brentwood*" (emphasis added), suggesting that the project should contain a mixture of uses but nonetheless be a part of the Brentwood community. The suggested measure is designed to ensure City/County coordination.

Impact on Brentwood Cumulative Jobs/Housing Balance. The discussion below pertains to the overall cumulative, long-term balance in the Brentwood area between total jobs and housing. A related issue involves project internal consistency with policies regarding the need for a balance in rapidly developing areas between "new" residential and employment opportunities. This internal project issue is addressed in subsection f of this chapter, Project Internal Land Use Impact (see *Impact LU-11*).

The term "jobs/housing ratio" is commonly used to describe the relationship between the number of local jobs available and the number of local employed residents. To the degree that a balance is achieved between the number of local jobs and the number of local employed residents, there is a greater opportunity for local residents to work close to where

without the project to 0.62 with the project.¹ The jobs/employed resident ratio is considered a more accurate measure of the balance between job and housing opportunities, since it reflects the actual estimated number of workers in the community rather than assuming that each household will contain only one worker.

Mitigation for Impacts on Brentwood Jobs/Employed Resident Balance. No significant impact has been identified; no mitigations are required.

Impact LU-5: Impacts on Commercial Retail and Office Development In Brentwood.

Depending on the nature of future commercial uses, project-proposed commercial retail and office development may detract substantial business from existing commercial development in Brentwood, representing a *potentially significant economic impact*. Under CEQA, an economic impact shall not be treated as a significant environmental impact unless there is a chain of cause and effect from the anticipated economic effect to significant adverse physical environmental impact. No evidence of such a cause and effect has been identified for this economic impact.

In 1993, the Brentwood community contained approximately 64 acres of commercial development and 58 acres of office development. Approximately 20 acres of this existing commercial development (or approximately 1.5 acres per 1,000 residents) was contained in the two principal local convenience shopping centers, Brentwood Towne Center and Brentwood Center. An economic study completed for the project applicant indicates that existing (1994) market demand in Brentwood cannot support a substantial addition in convenience sales.² Thus, any substantial new convenience commercial development within the local market area that is not supported by a corresponding increase in residential development would likely reduce the viability of existing convenience commercial development in Brentwood.

The proposed project at buildout would include approximately 45.8 acres (698,267 square feet) of commercial retail and office development. This total would consist of 9.35 acres (142,550 square feet) of commercial office and 20.55 acres of commercial retail in the North Village, and 4.1 acres (62,509 square feet) of commercial office and 11.8 acres (179,903 square feet) of commercial retail in the East Village. The *Cowell Ranch P-1 Planned Unit District Development Standards* document submitted by the project applicant does not specify permitted uses within the proposed *Commercial (CO)* designation.

¹16,332 jobs without the project + 6,628 project jobs = 22,960 total jobs. 29,289 employed residents without the project + 7,849 project employed residents = 37,138 employed residents. 22,960 jobs divided by 37,138 employed residents = 0.62.

²Keyser/Marston Associates, Inc., Commercial and Employment Market Analysis, Cowell Ranch, Brentwood, CA, August 1993, page 22.

The 45.8 acres of project commercial development would translate to approximately 3.5 acres per 1,000 project residents.¹ Comparison of this figure with the current ratio (approximately 1.5 acres per 1,000 residents) indicates that this amount of planned project additional commercial acreage could substantially exceed project market demand, and as a result, future project commercial development could substantially reduce the viability of existing commercial development in Brentwood.

r The effects described are economic rather than environmental. The CEQA Guidelines state
r that the economic effects of a project shall not be treated as significant effects on the
r environment, unless there is a chain of cause and effect from the anticipated economic effects
r to adverse physical (environmental) changes caused by the economic effects (CEQA
r Guidelines Section 15131). No evidence has been identified that such a cause and effect
r could occur for this particular economic effect; therefore, this economic effect is not
r considered to represent a significant environmental impact.

r It should also be noted, however, that the substantial amount of approved and pending
r residential development in Brentwood (7,371 units--see Table 10) when eventually constructed
r and occupied, could cumulatively reduce this impact by increasing demand for commercial
r retail and office uses.

r **Mitigation LU-5:** No significant environmental impact has been identified; no mitigations
r are required under CEQA.

r Although not required under CEQA, anticipated project impacts on the viability of existing
r commercial development in Brentwood could be reduced through (a) project commercial
r zoning limitations, and (b) establishment of direct and convenient transit service between
r the project and downtown Brentwood.

r Possible measures to improve the viability to existing commercial development in Brentwood
r include the following.

r (a) *Commercial Zoning.* Planned development zoning regulations that specify permitted land
r uses could be established for project commercial areas. Finalization of the project planned
r development zoning regulations could be done in consultation with the City of Brentwood to
r foster development of complementary rather than competing commercial uses, to the extent
r possible.

r (b) *Transit Service.* As suggested in the Brentwood General Plan, direct and convenient
r transit service should be established between the project and downtown Brentwood to
r encourage patronage of downtown commercial development by project residents while

¹Project buildout population would total 13,076 people; 45.8 acres ÷ 13.076 = 3.50 acres per 1,000 people.

minimizing local traffic and the need for downtown parking. Such a transit link would also reinforce the role of central Brentwood as a cultural and economic center.

Impacts on Non-Retail Commercial and Industrial Development. The 76 acres of business park development proposed by the project would help meet projected subregional demand for this type of use and would not be expected to compete with existing local business, since there is currently very little of this type of development in Brentwood. The project's potential effect on local non-retail commercial and industrial development is therefore considered *less-than-significant* (see Criteria #3 and #5 under "3. Significance Criteria" above).

manufacturing of incidental retail goods, public utility buildings, and accessory outdoor storage.¹

The 76 acres of business park development proposed by the project would provide for approximately 65 percent of the demand of non-retail commercial and industrial development that could be captured by the project, according to the estimates provided by the applicant's economic consultant. There is currently very little of this type of development in Brentwood, and therefore the proposed project business park component would not be expected to generate significant adverse impacts on existing local business.

Mitigation for Impacts on Non-Retail Commercial and Industrial Development. No significant environmental impact has been identified; no mitigations are required.

c. Impacts on Other Nearby Land Uses (Outside Brentwood Planning Area)

Impact LU-6: Impacts on Rural Residential Uses. The project, combined with other pending and/or approved development, would alter the existing rural residential character of the south Brentwood vicinity by introducing urban development, roadway and other improvements, and project-related traffic and associated noise. This change would represent a **significant project and cumulative impact** (see Criteria #2-4 under "3. Significance Criteria" above).

Combined with other pending and/or approved development in the south Brentwood area (e.g., Spanos project, SR 4 Bypass), the project would substantially increase traffic volumes along local roadways, which would in turn increase traffic noise volumes and would ultimately require the improvement of various existing rural roadways to urban standards. These improvements could also require the removal of existing rural elements of the roadside landscape (e.g., post and wire fencing, rural drainage improvements) that contribute to the area's rural character. The project would also introduce suburban residential, commercial, business park, golf course, park and recreation, and public or semi-public land uses to the project site, which would be visible from some existing rural roadways and rural residential areas (e.g., from Deer Valley Road, Camino Diablo, and Marsh Creek Road), further detracting from the rural land use character of the area. The combination of these effects from the project and other pending and/or approved development could be expected to alter the rural land use character of the south Brentwood area.

¹S.H. Cowell Foundation, *Cowell Ranch P-1 Planned Unit District Development Standards*, March 25, 1996, sections 6.2.1 and 6.2.3.

d. Impacts on Adjacent Land Uses

(NOTE: Please refer to Figure 17 for locations of adjacent land uses.)

- r **Impacts Related to the PG&E Gas Terminal and Compressor Station.** The project proposes development of commercial, park and recreation (community park), and open space
- r uses adjacent to the existing PG&E Gas Terminal and Compressor Station. This relationship would represent a ***less-than-significant land use impact***, as explained below (see Criteria #3 and #6 under "3. Significance Criteria" above).

- As shown on Figures 6 and 8 in section III, Project Description, of this EIR, commercial uses
- r (Planning Area 22) would adjoin the southern boundary of the PG&E gas terminal and
 - r compressor station. A portion of the proposed community park (Planning Area 21) would adjoin the facility's eastern boundary, and an open space buffer area associated with the project's major thoroughfare would adjoin its western boundary. Land use compatibility issues
 - r with respect to compression station exterior lighting, odor, noise, and potential safety (fire or explosion) risks, are addressed in sections IV.J (Visual Factors), IV.K (Air Quality), IV.L (Noise), and IV.M (Public Health and Safety) of this EIR.

- r **Mitigation for Impacts Related to the PG&E Gas Terminal and Compressor Station.** No significant adverse land use compatibility impacts have been identified beyond those described in other sections of this EIR (see below); no additional mitigations are required.

Mitigation needs for associated visual, odor, noise, and public health and safety impacts are identified in sections IV.J (Visual Factors), IV.K (Air Quality), IV.L (Noise), and IV.M (Public Health and Safety).

Impact LU-7: Impacts on John Marsh Home State Park Site. The project would (1) extend a major thoroughfare through the northern portion of the John Marsh Home State Park site; and (2) close Marsh Creek Road south of the Marsh Creek Reservoir, restricting access to the park from the south. These changes would represent a ***potentially significant impact*** on the State Park site (see Criteria #3 and #6 under "3. Significance Criteria" above).

As shown in Figures 6 and 8 in section III, Project Description, the major thoroughfare proposed by the project would extend through the northern portion of the John Marsh Home State Park site. At its closest point, the thoroughfare right-of-way would pass within approximately 150 feet of the historic John Marsh Home, with associated roadway grading within approximately 100 feet of the home. The proposed community park would extend along the northeastern and western boundaries of the state park site, and a designated open space area would adjoin the state park's southeastern boundary. The state park's southern

boundary adjoins an existing open space area associated with Marsh Creek Reservoir, which is not a part of the project site.

The project also proposes single-family and multi-family residential development (Planning Areas 27-29) approximately 200 to 900 feet north of the state park site. While these development areas would be separated from the state park site by Marsh Creek, the associated creek riparian corridor, a community park, and the proposed major thoroughfare, portions of the residential development areas could be visible from the state park due to their higher elevation, and would detract from the character of the historic site. This visual impact is further discussed in section IV.J, Visual Factors, of this EIR.

Project impacts on use demands at the future John Marsh Home State Park are discussed in section IV.F, Public Facilities and Services, of this EIR (see *Impact PF-17*).

Traffic on the proposed major thoroughfare and increased traffic on Marsh Creek Road north of Marsh Creek Reservoir, plus the general increase in background noise associated with the project, would also detract from the setting of the historic site. However, these noise effects would not be expected to represent a significant adverse impact on the character of the park. The project noise impact on the John Marsh Home State Park site is further discussed in section IV.L, Noise, of this EIR.

Mitigation LU-7: As recommended under *Mitigation PF-17* in section IV.F, Public Facilities and Services, require the applicant to provide greater than 1:1 compensation for any loss of useable park area that would result from the extension of the project's major thoroughfare through the northern portion of the park site by dedicating a portion of the proposed adjoining community park and/or open space area to the state. Also require the applicant to prepare specific design studies for the project/state park relationship that (1) show in detail the relationship of the thoroughfare to the State Park site; (2) locate the major thoroughfare as far as possible from the John Marsh Home; (3) define an alignment and point of closure for Marsh Creek Road that has the maximum positive effect on the park and adjoining entrances, parking areas, and open spaces areas; and (4) provides for landscape screening along the south side of the proposed major thoroughfare to block views from the John Marsh Home State Park site. Require design consultation with the John Marsh Historic Trust, Inc., and approval of the specific design studies by the State Park Department, Contra Costa County, and City of Brentwood. This measure would reduce the impact to a ***less-than-significant level***.

Please refer to section IV.J, Visual Factors, for additional mitigations that address the visual impact of proposed project residential development north of the state park site.

In addition, as explained in section IV.L, Noise, while not necessary to offset identified adverse environmental impacts of the project, the specific design studies stipulated above should also consider the traffic noise from the proposed major thoroughfare and from Marsh

retained or removed; this would be determined by the public agency (e.g., County, City of Brentwood) that receives the park dedication.¹ While the structure would no longer be available for rural residential use, the project would compensate through construction of low-density single-family housing, and would therefore have a ***less-than-significant impact*** on this onsite housing (see Criterion #9 under "3. Significance Criteria" above).

Mitigation for Impacts on Existing Rural Residential Uses. No significant adverse land use impacts have been identified; no mitigation is required.

Impacts Related to Existing Flood Easement Areas. The project proposes that portions of the project site located within the Marsh Creek Reservoir 200-foot contour flood easement area be designated as open space, and would therefore have a ***less-than-significant impact*** on these easement areas (see Criteria #3 and #6 under "3. Significance Criteria" above).

As shown on Figure 4 in section III, Project Description, portions of the project site are located within the 200-foot contour flood easement for the Marsh Creek Reservoir, which adjoins the project site. The project proposes that these areas be designated as open space. Please refer to section IV.E (Drainage, Flood Control, and Water Quality) for discussion of project drainage-related impacts on Marsh Creek Reservoir and vicinity.

Mitigation for Impacts Related to Existing Flood Easement Areas. No significant adverse land use impacts have been identified; no mitigation is required.

Impacts Related to the Onsite Sand Mine. The project proposes residential development on the southern portion of the former onsite sand mine, with the remainder of the mine site designated as open space. Since the mine is no longer in operation, this would be considered a ***less-than-significant land use impact*** (see Criterion #3 under "3. Significance Criteria" above).

As illustrated on Figures 4 and 6 in section III, Project Description, project-proposed single- and multi-family residential development (Planning Areas 39 and 40) would cover the southern portion of the former sand mine site. Impacts associated with the loss of project site Domengine Sandstone deposits as mineral resource are addressed in EIR section IV.H, Mineral Resources.

Mitigation for Impacts Related to the Onsite Sand Mine. No significant adverse land use impacts have been identified; no mitigation is required.

¹Gary Craft, Project Manager, Cowell Ranch Project, personal communication, September 24, 1996.

foster a balanced rate of onsite housing and job opportunities during the projected 25-year course of Phase I and Phase II buildout.

At buildout, the project would provide an estimated 6,628 jobs and 5,226 housing units for a jobs/housing ratio of 1.27. More specifically, the anticipated total number of employed residents (7,849) projected to be accommodated by onsite housing would exceed the anticipated maximum number of onsite jobs (6,628). (See Tables 6, 7, and 11.) Table C-12 in section IV.C, Transportation, of this EIR estimates that, by buildout of Phase II in 2026, only 28.8 percent of trips beginning onsite in the AM peak hour would remain onsite. The number of trips remaining onsite could be lower during the development stages of the project if significant employment-generating uses do not occur until the latter stages of the project.

As a result of these factors, the project could produce substantial onsite imbalances between associated new housing and job opportunities in an area of rapid growth, which would represent an inconsistency with County and City general plan policies and, thus, a **potentially significant adverse impact**.

Mitigation LU-11: As a condition of project approval, require applicant formulation and submittal of an *Employment Development Program (EDP)* for approval by the County (or the City of Brentwood, if the project includes annexation to the City) that includes the following components: (a) onsite jobs/housing targets, (b) infrastructure phasing to foster early and continuous employment development, (c) an employment development marketing strategy (with provisions for County, City of Brentwood, and Contra Costa Community College District involvement), (d) a hiring program, (e) a housing affordability program, (f) an annual reporting procedure, and (g) an ongoing monitoring and enforcement program. The EDP shall cover the projected 26-year course of Phase I and Phase II buildout. With the monitoring and enforcement provisions, there is reasonable assurance that these measures would achieve an adequate balance between the development of housing and jobs, and that this potential project impact would therefore be mitigated to a **less-than-significant level**.

To link the development of onsite housing and jobs more closely, require the project to prepare and incorporate into the County (or City)/applicant development agreement an *Employment Development Program (EDP)*, subject to approval by the County (or by the City of Brentwood Economic Development Coordinator, if the project site is to be annexed to the City of Brentwood). The EDP should be coordinated with the *Project Housing Strategy* and *Housing Mix and Affordability Monitoring Program* (see **Mitigation LU-3** above), as well as with compliance with adopted *roadway system performance standards*, as identified under **Mitigation T-1** in section IV.C, Transportation, and should be reviewed and approved prior to issuance of building permits for any traffic-generating development on the project site. The EDP should include the following components:

(a) *Onsite Jobs/Housing Targets*. The EDP should specify onsite or local jobs/housing ratio targets for each five-year increment of project buildout. These targets should take into account the availability of local housing and improved access (SR 4, SR 4 Bypass, BART, and

local transit improvements) that will affect the feasibility of onsite employment growth, the number of employed residents accommodated by onsite housing, the estimates in this EIR for the number of employed residents forecasted to commute to onsite jobs by buildout of Phase I and Phase II, and factors such as the match between residents' skills and the required job skills and between job salaries and local housing costs.

(b) *Infrastructure Phasing.* The EDP should specify the sequence of infrastructure improvements necessary to accommodate a balanced rate of employment-intensive onsite development, as well as a funding mechanism to achieve this improvement sequence.

(c) *Employment Development Marketing Strategy.* The EDP should outline a project marketing strategy designed to attract desirable employment-generating uses to the site (i.e., uses that generate employment types and salary levels commensurate with project housing costs), as well as provisions for implementing this strategy. The strategy should be developed with participation from the County and the City of Brentwood, as well as the Contra Costa Community College district (to take advantage of the potential for physical site plan connections and joint programs between the onsite community college and business park).

(d) *Hiring Program.* The EDP should establish implementation provisions and future project responsibilities for a hiring program that would encourage local hiring. New employers should be encouraged to announce jobs in local papers and provide job announcements to project residents, as well as hold interviews locally to facilitate local hiring.

(e) *Housing Affordability Program.* The EDP should include a *Project Housing Strategy*, as described under **Mitigation LU-3** above, that specifies project housing affordability goals, including provisions for housing that is affordable to people employed by project employment uses.

- r (f) *Annual Reporting.* The EDP should specify responsibilities for preparation of an *EDP Progress Report* to the County (or to the City of Brentwood Economic Development
r Coordinator, if the project site is to be annexed to the City of Brentwood). The *Progress*
r *Report* should be submitted at six-month to one-year intervals, and should indicate current onsite employment totals, onsite employed resident estimates, the associated cumulative ratio, whether the ratio to date meets the associated target, and if not, what additional measures are being implemented to provide an improved ratio.
- r If necessary, the *EDP Progress Report* should also consider the community-wide jobs-per-employed-resident-ratio to indicate whether nearby employment development activity offsets the need for an improved onsite ratio.

r **Note:** If the onsite jobs-per-employed-resident ratios specified in the EDP are not
r realized, further environmental review beyond that provided by this EIR would be required.

(g) *Monitoring and Enforcement.* The County (or the City of Brentwood, if the project site is to be annexed to the City) should review the *EDP Progress Report* (1) each year, (2) prior to any substantial¹ subsequent individual development approvals for the project site, and (3) at any other times determined appropriate by the Board of Supervisors (or Brentwood City Council, if the project includes annexation to the City of Brentwood). As part of this review, the County (or City) may allow review of and comment on the *EDP Progress Report* by affected jurisdictions and agencies.

If it is determined during formal review of the *EDP Progress Report* that the jobs-per-employed-resident targets anticipated by the project and assumed for purposes of this EIR analysis have not been achieved, the Board of Supervisors (or Brentwood City Council) should establish a limit on the issuance of future onsite residential building permits. The maximum number of residential units authorized by future onsite building permits should be tied to the building permits issued for construction of a minimum amount of non-residential onsite gross floor area. The maximum quota for residential construction, and the minimum quota for non-residential construction, should be determined prior to approval of the next *EDP Progress Report*. In establishing these quotas for future building permits, the Board (or City Council) should consider testimony from members of the public, the developers and landowners in the project, and should evaluate issues including, but not necessarily limited to, the following:

- Regional traffic conditions.
- The characteristics of onsite housing and the commutes generated by the residents of this housing.
- Recent employment development efforts, including specific employers that are considering or have committed to locating at Cowell Ranch.
- A comparison of the job creation rate in the project with local, state, and national economic or market trends and financing availability.
- The fact that the applicant will not be able to control certain factors affecting job creation, including regional economic and market cycles.
- The types of jobs created in the project to date, including an evaluation of the wage scale or salary level, the portion of full-time vs. part-time positions, and the number of jobs in regional vs. population-serving industries.
- Project-related job creation within the greater subregion (East County).
- Other employment creation activity in the region (e.g., the East County Airport expansion).
- The effects of including construction jobs in the calculation of the jobs/employed resident ratio.

¹With "substantial" to be determined through the County's (or City's) standard CEQA-based Initial Study process.

these commercial centers. The areas located outside convenient walking distance would include the East Hills (444 units), West Creekside (416 units), North Hills (1,376 units), and Golf Course Residential (693 senior citizen units) subareas. In addition, the outer portions of the East Village residential area (i.e., outer portions of Planning Areas 40, 41, 51, 53, 58, 59, and 60 on Figure 8 in section III, Project Description) would not be within a one-quarter-mile radius of the East Village commercial center; however, Planning Area 41 would be within one-quarter mile of the East Creekside business park/community college area, which would be linked to the East Village subarea via a vehicle/pedestrian underpass. The areas located furthest from a commercial center would be the outer portions of the North Hills and Golf Course Residential subareas, which would be located approximately one-and-a-half miles from the North Village. This distance is of greatest concern for the Golf Course Residential subarea, which is proposed to contain 693 units designed for senior citizens; these residents are likely to be less mobile than average and therefore more dependent on transit service.

Mitigation LU-12: Provide an internal transit system (shuttle buses or demand-responsive vans) which serves occupied areas of the project which are not within convenient walking distance of the two village centers, provide a transit and small-scale convenience commercial center in the Golf Course Residential subarea for senior citizen residents of this subarea, and implement transit-related measures identified in *Mitigations T-1* and *T-12* in section IV.C, Transportation, of this EIR. Implementation of these combined measures would reduce the impact to a ***less-than-significant level***.

Impact LU-13: SR 4 Bypass Impacts. The project proposes business park, community college, single- and multi-family residential, parks and recreation, and open space uses adjacent to the proposed State Route 4 Bypass. These land uses would be subject to Bypass-related land use compatibility effects related to visual factors, air quality, and noise (see sections IV.J, (Visual Factors), IV.K (Air Quality), and IV.L (Noise)), representing a ***potentially significant impact*** (see Criteria #3 and #5 under "3. Significance Criteria" above).

Mitigation LU-13: Implement *Mitigation V-7* recommended in section IV.J (Visual Factors), *Mitigation AQ-2* recommended in section IV.K (Air Quality), and *Mitigation N-1* recommended in section IV.L (Noise). These measures would mitigate this land use compatibility impact to a ***less-than-significant level***.

B. AGRICULTURE

The following section describes existing agricultural conditions on the project site, in the local vicinity, and in Contra Costa County; environmental goals and policies related to agriculture; criteria for determining the significance of impacts on agricultural uses; potential project impacts on these conditions; and mitigation measures warranted to address identified significant impacts.

1. SETTING

a. Existing Onsite and Local Agricultural Activity

(1) Onsite Agricultural Activity and Productivity. The project site has been used primarily for grazing since it was purchased by Samuel Henry (S.H.) Cowell in 1924. Approximately 1,500 cattle are currently grazed on the Cowell Ranch property each year.¹ In 1986, an irrigation system was installed on the eastern edge of the property and a 217-acre apple orchard was planted here (see Figure 21). The site also contains approximately 128 acres of alfalfa fields in the lowland flood plain area in the south-central portion of the site, east of Marsh Creek along both sides of Marsh Creek Road.

The remaining portions of the project site (i.e., the sand mine area, the area surrounding the John Marsh Home State Park site, and the area west of Deer Valley Road) are not currently farmed or ranched.

(2) Surrounding and Adjacent Agricultural Activity. The project site is located in an agricultural area that extends from the Diablo Range eastward into the San Joaquin Valley. The project location represents an agricultural activity transition point as shown on Figure 21; land northwest, west, southwest, south, and southeast of the site is used primarily as grazing land for cattle, and land to the east and northeast is used for orchards, row crops, and field crops. The orchards in the area include apple, cherry, apricot, and walnut; row crops, primarily tomatoes; and local field crops, primarily alfalfa.

(3) Countywide Agricultural Productivity. As shown in Table 12, the total amount of farmland in Contra Costa County in 1992 was approximately 221,380 acres. The 4,277-acre project site, which is designated for agricultural use by the Contra Costa County General Plan,

¹Gary Craft, Project Manager, Cowell Ranch Project, personal communication, September 24, 1996.

Table 12
AGRICULTURAL ACREAGE¹ TRENDS IN CONTRA COSTA COUNTY (1940-1992)

	<u>1940</u>	<u>1950</u>	<u>1960</u>	<u>1970</u>	<u>1980</u>	<u>1990</u>	<u>1992</u>
r Pasture and Range	275,500	246,250	217,000	187,060	175,730	179,000	185,610
r Field Crops	80,780	55,990	38,170	31,210	22,800	22,800	21,840
Vegetables	21,260	10,750	16,940	7,230 ²	7,680	8,560	8,580
Fruits and Nuts	30,780	30,590	27,510	18,940	11,160	5,480	5,350
r TOTALS	<u>408,320</u>	<u>343,580</u>	<u>299,620</u>	<u>244,440</u>	<u>217,370</u>	<u>215,840</u>	<u>221,380</u>

SOURCE: Compiled from Contra Costa County Agriculture Department annual Crop and Livestock Reports.

Notes:

¹ Includes only acres harvested or under cultivation, rounded to nearest 10 acres

² Severe spring frosts during 1970 resulted in an abnormally low number of acres in vegetables. In 1969 and 1971 there were 9,660 and 8,030 acres in vegetable production, respectively.

Prime Farmland. Land that has the best combination of physical and chemical features for the production of crops (e.g., water, soil temperature, acid alkali balance, water table, soil sodium content, flood conditions, erodability, permeability, rock fragment content, and rooting depth).

Farmland of Statewide Importance. Land other than *Prime Farmland* that has a good combination of physical and chemical features for the production of agricultural crops.

Unique Farmland. Land of lesser quality soils that is used for the production of the state's leading cash crops.

Farmlands of Local Importance. Land that is important to the local agricultural economy.

Grazing Land. Land on which existing vegetation is suited to the grazing of livestock.

The state rating system also includes definitions for non-agricultural land classifications, such as *Urban and Built-up Lands*, *Other Lands*, and *Land Committed to Non-agricultural Use*.

As shown on Figure 23, the eastern portion of the site, which contains the existing 246-acre apple orchard and is located within the County-designated *Urban Limit Line*, is designated by the State Department of Conservation as *Prime Farmland*. With some exceptions, the flatter portions of the remainder of the site (approximately 1,351 acres) are generally designated as *Farmland of Local Importance*, and the hillier areas of the site (approximately 2,680 acres) are generally designated as *Grazing Land*.

r Table 13 tabulates Department of Conservation *Farmland Mapping and Monitoring Program* data for Contra Costa County in 1984 and 1992. The table shows that the total amount of state-designated farmland in Contra Costa County, including grazing land, has declined by approximately 17,027 acres or 5.8 percent between 1984 and 1992.

c. Local Williamson Act Contracts

(1) Williamson Act Intent. In 1965, the State of California adopted the *Land Conservation Act* ("Williamson Act," State Government Code Section 15120 et seq.) which entitles farmers to reduced property taxes in exchange for maintaining their land in agricultural or open space use. Such Williamson Act "agricultural preserve" contracts run for at least ten years and are renewed automatically each year, so that at least nine years remain on contracted land at any given time. Properties need not contain prime agricultural soils to qualify for Williamson Act contract status.

(2) Williamson Act Termination Process. *Non-renewal* is the standard method of terminating Williamson Act contracts. This process is typically initiated by the property owner by filing a notice of non-renewal with the local jurisdiction. The reduced property taxes are then

gradually adjusted upward to reflect the new status of the property, and the land use restrictions are eventually lifted after the remaining nine years on the contract have passed.

Cancellation is a second method of terminating Williamson Act contracts. As specified in Government Code Section 51282, applications for cancellation can only be approved when city councils or boards of supervisors can make the following two findings:

- the cancellation is not inconsistent with the purposes of the Williamson Act; and
- that the cancellation is in the public interest.

The Act also states that the opportunity for other land uses is not enough to warrant cancellation, and alternative land uses can only be considered if "...there is no proximate non-contracted land suitable" for the alternative use. The uneconomic character of current agricultural production is not, in itself, a sufficient reason to cancel a contract. Unless these standards can be met, cancellations must be denied by the local jurisdiction. Section 51284 of the Government Code also requires that a noticed public hearing be held regarding the cancellation.

(3) Project Site Williamson Act Status. The project site was under a Williamson Act contract that was the subject of a notice of non-renewal notice in 1987 and subsequently expired in February 1996. The project site is therefore no longer under Williamson Act contract, and does not benefit from reduced taxation status.

(4) Other Local Williamson Act Lands. Figure 24 illustrates the location of properties in the project vicinity that were under Williamson Act Contract in 1996. As shown, the Cowell Ranch property is surrounded by a several Williamson Act (agricultural preserve) lands. The Spanos property immediately to the north of the site is currently under a Williamson Act contract that is scheduled to expire in February 1999. As shown on Figure 24, other lands under contract in the project vicinity include the Lopez/Nunn Ranch located east and north of the project site, another parcel directly east of site across Walnut Boulevard, and parcels on each side of Marsh Creek Road southwest of the project site.

r 2. RELEVANT ENVIRONMENTAL POLICIES AND GUIDELINES

a. Contra Costa County General Plan Policies and Other Provisions

(1) Agricultural Land Use Designations. The Contra Costa County General Plan contains the following agricultural land use designations:

- **Agricultural Lands.** This land use designation applies to most of the privately-owned non-urban lands in the County, excluding properties that are composed primarily of SCS-designated *prime soils* or lands located near the Delta. The purpose of this designation is to preserve and protect County lands capable of and generally used for production of

food, fiber, and plant materials. Most of these designated *Agricultural Lands* are in hilly portions of the County and are used for grazing livestock or dry grain farming. The land use category also includes some non-prime agricultural lands in flat areas. As shown in Figure 25, the project site and adjoining lands to the north, west, and south are designated by the Contra Costa County General Plan as *Agricultural Lands*.

The *Agricultural Lands* designation allows land-dependent and non-land dependent agricultural production and related activities, as well as agricultural processing facilities, ancillary commercial agricultural support services, and small-scale visitor-serving uses such as tasting rooms, farm product sale stands, guest ranches, horse ranches, and campgrounds. The maximum allowable residential density in this land use category is one unit per five acres.¹ Requests for subdivision of properties designated *Agricultural Lands* must comply with the County's "Ranchette Policy," which is outlined in the Agricultural Resources section of the General Plan Conservation Element. The Ranchette Policy includes requirements for onsite water wells or other water availability, roads and access, septic tank use, minimal grading, energy conservation, limited flooding and landsliding susceptibility, and adequate fencing, all in the interest of preserving the basic agricultural potential of the land.²

- ***Agricultural Core***. This County land use designation represents the County's prime agricultural land use classification and applies to properties that contain primarily Class I and II soils (i.e., *prime soils*). The stated purpose of this designation is to preserve and protect those farmlands in Contra Costa County that are most capable of, and are generally used for, the production of food, fiber, and plant materials. Residential homesites are allowed in this designation on 40-acre minimum lots. The geographical extent of the County's current *Agricultural Core* designation is comprised of one approximately 9,000-acre area contiguous to the eastern and southern edges of Brentwood, and overlaps the northeast edge of the project site. As illustrated on Figure 25, the *Agricultural Core* boundary extends from the northeast edge of the project site (the offsite side of Marsh Creek and the south, onsite side of the Kellogg Creek side channel) eastward to Discovery Bay, southward to the community of Byron, and northward to the western portion of Lone Tree Way north of Brentwood. Most of the existing land under this designation is currently under active cultivation with orchards and intensive row crops such as corn, tomatoes, and other vegetables. The portion of the project site within the *Agricultural Core* designation (approximately 25 acres) currently extends slightly south of the Kellogg Creek side channel (i.e., slightly south of the Marsh Creek tributary that leads to Kellogg Creek).

¹Contra Costa County, Contra Costa County General Plan, 1995-2010, page 3-34.

²Contra Costa County, Contra Costa County General Plan, 1995-2010, *Conservation Element*, Implementation Measure 8-w, pages 8-42 through 8-43.

(2) Urban Limit Line. As described in section IV.A, Land Use, of this EIR, the Contra Costa County General Plan designates an *Urban Limit Line (ULL)* beyond which land is not eligible for urban development and must remain in agricultural or open space use. As indicated in EIR sections III and IV.A, the *ULL* currently bisects the project site, with the north and east portions of the site, representing approximately 2,077 acres or 49 percent of the 4,277-acre property, located within the *ULL* and the remaining approximately 2,200 acres located outside the *ULL*. The 246-acre apple orchard is located within the *ULL*.

(3) Other Policies. The Contra Costa County General Plan contains the following additional adopted goals and policies regarding agriculture:

- *Preservation and buffering of agricultural land should be encouraged as it is critical to maintaining a healthy and competitive agricultural economy and assuring a balance of land uses...* (Land Use Element, Policy 3-12, page 3-41)
- *Protect prime productive agricultural land from inappropriate subdivisions.* (Land Use Element, Policy 3-14, page 3-41)
- *Areas that are highly suited to prime agricultural production shall be protected and preserved for agricultural and standards for protecting the viability of agricultural land shall be established.* (Conservation Element, Policy 8-2, page 8-3)
- *Large contiguous areas of the County should be encouraged to remain in agricultural production, as long as economically viable.* (Conservation Element, Policy 8-29, page 8-40)
- *Agriculture shall be protected to assure a balance in land use. The policies of Measure C-1990 shall be enforced.* (Conservation Element, Policy 8-32, page 8-41)
- *Urban developments shall be required to establish effective buffers between them and land planned for agricultural uses.* (Conservation Element, Policy 8-34, page 8-41)
- *Residents in or near agricultural areas shall be informed and educated regarding the potential nuisances and hazards associated with nearby agricultural practices.* (Conservation Element, Policy 8-35, page 8-41)
- *Agriculture shall be protected from nuisance complaints from non-agricultural land uses.* (Conservation Element, Policy 8-36, page 8-41)

b. Conditions for a 21st Century Community

Contra Costa County's Conditions for a 21st Century Community contains no policies directly related to agriculture.

c. Principles and Guidelines for Cowell Ranch

The Principles and Guidelines for Cowell Ranch document adopted by the Contra Costa County Board of Supervisors contains the following guidelines related to agriculture:

- *Prime agricultural land (i.e. Class I & II soils) outside the Urban Limit Line should be reserved for agricultural use. (Guideline 1.b)*
- *Development of Cowell Ranch for urban uses should occur inside the Urban Limit Line. Development of land outside the Urban Limit Line should be limited to non-urban uses and should avoid prime agricultural land. (Guideline 5.a)*
- *The Development Plan for Cowell Ranch should respect existing open space, growth management, agricultural, and hillside protection policies. (Guideline 5.b)*

d. City of Brentwood General Plan Policies and Other Provisions

(1) Agricultural Land Use Designations. The City of Brentwood General Plan 1993-2010 includes the 4,277-acre project site in its designated, approximately 5,000-acre "Special Planning Area (SPA) J" (see Figure B-4). The plan calls for eventual "balanced, mixed-use" suburban development in SPA "J" where the number of dwelling units "does not exceed an overall gross density of 2 units per acre for the entire planning area," and also states that agricultural use should be maintained within SPA "J" outside the county's *Urban Limit Line*, along with clustered rural residential uses, and recreational uses.¹

r The Brentwood General Plan EIR includes an analysis of the cumulative impacts of the SPA
r "J" and other general urban land use designations on agricultural values.

(2) Other Policies. The General Plan contains the following additional pertinent policies regarding agriculture:

- *Preserve agricultural lands adjacent to urban development, along the periphery of the community, and between development projects as feasible. (Community Design Element, Policy 2.2, page II.3-6)*
- *Minimize conflicts between agricultural and urban land uses. (Conservation/Open Space Element, Policy 1.2, page IV.1-4)*
- *Minimize impacts of development on agricultural uses. (Conservation/Open Space Element, Policy 1.3, page IV.1-5)*

3. SIGNIFICANCE CRITERIA

Based on the CEQA Guidelines, the project may be considered to have a *significant impact* on agricultural resources if it would:

¹City of Brentwood General Plan, 1993-2010, p. I-44.

1. Convert prime agricultural land to non-agricultural use or impair the agricultural productivity of prime agricultural land.¹ For purposes of estimating actual acreage, "prime agricultural land" is defined in this EIR as soils identified as Class I or II in the

¹CEQA Guidelines, Appendix G, Item y.

U.S. Department of Agriculture Soil Conservation Service (USDA SCS) *Land Capabilities Classification System*. This federal definition is more conservative than the State Department of Conservation's definition of *Prime Farmland*, which also considers whether or not the soil is irrigated; based on this definition, USDA SCS-rated prime soils that are not irrigated (e.g., due to temporary drought conditions) or intentionally left fallow may not be ranked as *Prime Farmland* by the State Department of Conservation.¹

2. Affect agricultural resources or operations by creating incompatible land uses.²
3. Create a potential public health hazard or attract people to an area and expose them to hazards found there.³
4. Conflict with applicable environmental plans or policies adopted by the agencies with jurisdiction over the project;⁴

These criteria are applied in this EIR section to evaluate the significance of identified project agricultural impacts.

¹Chuck Tyson, Associate Land and Water Use Analyst, Department of Conservation, personal communication, June 7, 1996.

²CEQA Guidelines, Appendix I, Item I(d).

³CEQA Guidelines, Section 15126(a) and Appendix G, Item v.

⁴CEQA Guidelines, Appendix G, Item a, and Appendix I, Item I(b).

^r = Indicates revised line; i.e., revision to Draft EIR made in response to public comment.

4. IMPACTS AND MITIGATION MEASURES

a. Impacts on Prime Agricultural Land

Impact AG-1: Loss of Lands with Prime USDA SCS Ratings. The project would result in the loss of approximately 390 acres of potentially productive SCS-designated *prime soils*, of which 357 acres are within the control of the project applicant and are proposed for urban development. Approximately 25 acres of these lands are within the County's current *Agricultural Core* designation. This approximately 357-acre loss would represent a **significant impact** of the project (see Criteria #1 and #4 under "3. Significance Criteria" above).

(a) *Prime Soils Proposed for Development.* The project proposes a General Plan Amendment, *Urban Limit Line (ULL)* adjustment, and rezoning to allow urban development on the project site. Figure 26 illustrates onsite prime agricultural soil areas proposed for urban development. As shown, the project proposes that a total of approximately 447 acres of prime agricultural soils be developed in the East Creekside, East Village, East Hills, West Creekside, North Village, and Golf Course Residential subareas. The 447-acre estimate includes approximately 57 acres of prime agricultural land that are jurisdictional wetlands and/or are in the vicinity of Marsh Creek or the Kellogg Creek side channel and are therefore effectively precluded from agricultural use; subtracting these 57 acres, approximately 390 acres of potentially productive prime agricultural soils would be affected by the project. Of the 390-acre total, approximately 11 acres consist of Contra Costa Water District (CCWD)-owned water pipeline right-of-way and approximately 22 acres consist of right-of-way to be devoted to the SR 4 Bypass, a related but separately planned project from the Cowell Ranch development. Subtracting these acreages from the 390-acre total, approximately 357 acres of potentially productive prime agricultural land under the control of the applicant would be directly affected by the project. As shown on Figure 25, approximately 25 acres of these prime soils lands are within the County-designated *Agricultural Core*.

The 357-acre total includes approximately 56 acres of prime soils in the Golf Course Residential subarea and approximately seven acres in the East Hills subarea that are not within the current *ULL* but would be included within the proposed *ULL*. The proposed *ULL* adjustment (see Figure 7 in section III, Project Description) would therefore increase the amount of prime agricultural land eligible for development by approximately 63 acres. This increase would not be offset by the proposed exclusion of other portions of the project site from the *ULL*, since the proposed community park would occupy the onsite prime agricultural soils in the excluded area, thereby preventing agricultural use of these soils.

The 357-acre total includes the existing 217-acre apple orchard is located on a portion of the prime soils within the proposed East Creekside and East Village subareas. Loss of this orchard would represent an estimated 20 percent reduction in the county's bearing acreage of apple orchard and an estimated five percent reduction in the countywide inventory of acres

planted in fruits and nuts.¹ Loss of the orchard would also eliminate three full-time, year-round jobs and other seasonal employment (three to four temporary jobs during non-winter months, 50 to 70 temporary jobs for pruning and thinning during an estimated six-week period in March and April, and approximately 100 temporary jobs for harvesting from early September to mid-November).

The project proposes that the remaining prime agricultural land on the project site located outside the proposed *Urban Limit Line* be designated as *Open Space* under the proposed General Plan Amendment. As shown in Figures 21 and 22, portions of these prime soils are currently used for alfalfa production (on the west side of the Marsh Creek Road right-of-way) and cattle grazing (in the western and southwestern portions of the project site). The cattle grazing area in the northern portion of the site (see Figure 21) is not located on prime soils.

(b) *Potential Policy Conflicts.* The proposed conversion of prime agricultural soils to urban use could conflict with the Contra Costa County General Plan Land Use Element Goal 3-14 ("*protect prime productive agricultural land from inappropriate subdivisions*"), as well as *Conservation Element Policy 8-2*, which states that "*areas that are highly suited to prime agricultural production shall be protected and preserved for agricultural (use).*" The 246-acre apple orchard, which is irrigated and currently in active use, can be considered "prime productive agricultural land" under *Land Use Element Goal 3-14*. In addition, a small (approximately seven-acre) portion of Planning Area 61 in the vicinity of the existing alfalfa field could be considered "prime productive agricultural land." The remaining prime soils proposed for development can be considered "highly suited to prime agricultural production" under *Conservation Element Policy 8-2* because they are classified as USDA SCS prime soils and consist of generally contiguous acreages (see Figure 26) in what is currently a relatively non-urbanized area of eastern Contra Costa County.

r It should be noted that, with the exception of the 217-acre apple orchard, the prime soils proposed for development are not currently irrigated, and that the majority of these soils are located within the County-designated *Urban Limit Line* (see Figure 7 in section III, Project Description). In addition, approximately 25 acres of the 357-acre total are within the County-designated *Agricultural Core*. The prime soils on the project site, including this portion of *Agricultural Core*, are separated from the remainder of the County-designated *Agricultural Core* by the Kellogg Creek side channel (see Figure 22), with the proposed SR 4 Bypass right-of-way (see Figure 26) and the Los Vaqueros Reservoir pipeline right-of-way (see Figure 4 in section III Project Description) creating an additional separation from the remaining *Agricultural Core* area. Some prime soils on the site contain jurisdictional wetlands and/or are in the vicinity of Marsh Creek or the Kellogg Creek side channel. These factors could be seen as reducing the long-term suitability of the prime soils for agricultural production.

¹1992 Agricultural Report.

- r The proposed conversion of prime agricultural soils to urban use could also conflict with
- r Brentwood General Plan Community Design Element Policy 2.2, which calls for preservation
- r of agricultural lands adjacent to urban development.

Mitigation AG-1: Redesign the project to avoid areas of prime agricultural soil. If these measures are not feasible, the project's effect on onsite prime agricultural soils would represent a **significant, unavoidable impact**, although the degree of unavoidable impact could be offset by a project contribution to an agricultural land trust satisfactory to the County.

Identified impacts due to the construction of urban development on USDA SCS designated Class I and II *prime soils* could only be mitigated through adequate avoidance of these areas and their preservation as agricultural land. As illustrated in Figure 26, avoidance would generally require that the East Creekside subarea, the majority of the West Creekside subarea (i.e., Planning Areas 35 and 36), portions of the East Village subarea (i.e., Planning Areas 44, 45, 46, 47, 55, 57, 59 and portions of Planning Areas 39, 50, 51, 54, 56, 58, 60,), portions of the North Village subarea (i.e., portions of Planning Areas 21, 23, 24, and 26-28), and portions of the Golf Course Residential subarea (i.e., portions of Planning Areas 31 and 32) be eliminated from the project or located in a different area of the site.

If one of these two measures cannot be accomplished without rendering the project infeasible, the project's effect on prime agricultural soils would be considered a significant unavoidable impact, although the degree of this unavoidable impact could be offset by a project contribution to an agricultural land trust.

Impact AG-2: Cumulative Agricultural Land Losses. The aggregate effect of the project losses of prime agricultural soils would contribute to the continuing cumulative loss of rangeland and prime agricultural soils in Contra Costa County. This would represent a **significant cumulative impact** of the project (see Criteria #1 and #4 under "3. Significance Criteria" above).

As described in the setting portion of this EIR section (Table 12), the County has lost a cumulative total of approximately 186,940 acres of agricultural land since 1940, including approximately 90,000 acres of pasture and range, 60,000 acres of field crops, and 38,000 acres of vegetable, fruit, and nut production. The project and other pending and anticipated urban developments in the Brentwood area and in the subregion (e.g., Brentwood Hills Country Club, Back Nine at Brentwood Country Club, Pittsburg's Southeast Annexation Area, the Dougherty Valley Specific Plan, and the Tassajara Specific Plan) would contribute substantially to a continuation of this trend. Cumulatively, the ongoing loss of agricultural land, including prime agricultural soils, has the potential to conflict with Contra Costa County General Plan Conservation Element Policy 8-29, which states that "*large contiguous areas of the County should be encouraged to remain in agricultural production, as long as economically viable.*"

r **Mitigation AG-2:** Project contributions to the cumulative loss of prime agricultural soils
r in the County could be achieved through project redesign to avoid areas of prime
r agricultural soils, as indicated in the *Mitigation AG-1* above. Any substantive
r development of the site would result in significant losses of rangeland. This project's
r contribution to cumulative losses of agricultural land in the county effect on onsite prime
agricultural lands would represent a ***significant, unavoidable impact***.

b. Impacts on Surrounding Agricultural Uses

Impact AG-3: Impacts on Remaining Onsite Agricultural Uses. The project proposes urban development adjacent to areas proposed to be designated as *Open Space* and zoned for agricultural use, including the existing alfalfa field on the west side of the Marsh Creek Road right-of-way and the cattle grazing area in the northern portion of the site. This juxtaposition of urban and agricultural/grazing uses would create the potential for health risks and nuisance complaints due to incompatibilities between urban and agricultural land uses, and the potential for increased conflicts between project and agricultural traffic on surrounding public streets. This combination of compatibility effects would represent a ***potentially significant impact*** of the project (see Criterion #2 under "3. Significance Criteria" above).

The project proposes that the southwestern and northernmost portions of the project site be designated as *Open Space* lands and zoned A-2 (*General Agricultural District*), which would allow agricultural and grazing uses. Consequently, continuing or potential future agricultural
r activity on adjacent agricultural lands and on the following three onsite areas could result in
r land use compatibility problems with adjacent existing and future urban uses (see Figure 8 in section III, Project Description):

- In the East Hills subarea, where proposed Planning Area 61 (low density multi-family residential) would be located just east of the area (currently an alfalfa field) along Marsh Creek Road;
- In the North Hills subarea, where proposed Planning Areas 1, 2, 5-8, and 12 (low-, medium-, and high-density single-family residential) would adjoin the area currently used for cattle grazing in the northern portion of the site; and
- In the Golf Course Residential subarea, where proposed Planning Areas 31 and 32 (low-density multi-family senior citizen dwelling units) would adjoin a proposed open space area that could be used for agricultural or grazing use under the proposed A-2 zoning.

r The proximity of the new project urban uses to existing or potential future adjacent agricultural uses could result in potential health hazards to the new project occupants due to the use of agricultural pesticides, fertilizers, herbicides, and other agents, particularly when applied aerally from airplanes or helicopters. This introduced proximity could also result in nuisances

for project occupants due to (a) annoying odors from livestock, fertilizer, or rotting crops; (b) dust from cultivation or the operation of heavy agricultural equipment; and (c) noise from use of airplanes, helicopters, and other farm equipment. Complaints from the new project occupants regarding such existing and future adjacent agricultural practices could increase pressure to abandon farming on these properties. The location of urban uses close to agricultural uses can also result in direct and indirect impacts on the agricultural operations due to the increased frequency of trespass and acts of vandalism, potential problems created by domestic pets harming or disturbing livestock, and greater conflict between agricultural and project-related traffic.

With development of the proposed project, the greatest potential for conflicts between agricultural and project traffic would be along Marsh Creek Road/Camino Diablo, where the project proposes access to Planning Area 61 (see Figure 9 in section III, Project Description) adjacent to the existing alfalfa field. This portion of the site would not generate substantial agricultural traffic, however. Traffic from existing and future agricultural uses in other portions of the site would use other portions of Marsh Creek Road, as well as Briones Valley Road, and would not be likely to conflict with project-related traffic. The project includes closure of the north-south portion of Marsh Creek Road from Marsh Creek Reservoir south to Camino Diablo; this closure would reduce the possibility of conflict between agricultural and urban traffic in this portion of the site.

Aside from the three areas noted above, the remaining areas of the project site that are currently used for agricultural (grazing) use are located in the easternmost and southeasternmost portions of the site (see Figure 21); proposed project urban development would not be close enough to these areas to create significant land use incompatibilities.

Mitigation AG-3: Provide for setbacks or agricultural buffers, dense landscaping, and construction of fencing consistent with the project *Habitat Management Plan* in the portions of Planning Areas 1, 2, 5-8, 12, and 61 that adjoin existing or potential future agricultural areas. Require that onsite agricultural activities be consistent with the approved *Habitat Management Plan* for the project. Provide for project occupant notification regarding agricultural activities and the County's *Right-to-Farm Ordinance*. Enforce the County's leash law. Require and enforce a provision that all future agricultural practices on the northern quarter of the existing alfalfa fields be "organic" as defined in the California Organic Food Act of 1990. These measures would reduce identified land use compatibility conflicts between project urban uses and adjacent agricultural uses to a ***less-than significant-level***.

(a) *Setbacks, Buffers and Landscaping.* To reduce the potential health impacts associated with introduction of urban development next to agricultural activity involving the use of fertilizers, pesticides, herbicides, and other potentially harmful agents, including those applied from the air, incorporate adequate setbacks or agricultural buffers into the designs of individual development projects. Distances of 300 feet or more between urban uses regularly

occupied by humans and farmland subject to use of these agents would be desirable. Dense rows of trees between the urban uses and the farmland would also be useful to screen materials carried by the wind. These setbacks would also assist in reducing potential nuisance impacts associated with odors caused by livestock, fertilizers, and rotting crops; noise impacts caused by aircraft and other farm equipment; and potential nuisance dust impacts associated with cultivation, livestock, or use of heavy agricultural equipment.

These measures would be consistent with Contra Costa County General Plan Conservation Element Policy 8-34, which states that "*urban developments shall be required to establish effective buffers between them and land planned for agricultural uses,*" and Policy 8-36, which states that "*agriculture shall be protected from nuisance complaints from non-agricultural land uses.*"

- (b) *Project Occupant Notification.* Require that all occupants of the project site (buyers and tenants) be notified of nearby agricultural activities and that the County has in effect adopted a
- r *Right-to-Farm Ordinance.* This measure would be consistent with Contra Costa County General Plan Conservation Element Policy 8-35, which states that "*residents in or near agricultural areas shall be informed and educated regarding the potential nuisances and hazards associated with nearby agricultural practices.*"
- r (c) *Regulatory Enforcement.* Ensure that proper farming practices occur to minimize conflicts, including monitoring of adjacent farming operation compliance with FAA regulations restricting airplane or helicopter "crop dusting" flights near the project. (County responsibility.)
- (d) *Fencing.* Discourage potential vandalism impacts on existing nearby agricultural activity by requiring the construction of adequate fencing surrounding affected fields and by the installation of "No Trespassing" signage.
- (e) *County Leash Law.* To reduce potential impacts to cattle and agricultural crops by domestic pets, strictly enforce the County's leash law (County and applicant responsibility), and require construction of fencing as described above. If the project is annexed to the City of Brentwood, the city's Leash Law, which is identical to the County's,¹ would apply.

¹Lieutenant Manuel Misquez, City of Brentwood Police Department, personal communication, September 20, 1996.

Mitigation AG-4: Implement mitigation measures (a), (b), (c), (d) and (e) listed above under *Mitigation AG-3*. These measures would reduce the impact to a ***less-than-significant level***.

The setback and landscaping measures described in the mitigation for *Impact AG-3* would be particularly important (1) along the eastern, Walnut Boulevard/Vasco Road edges of the proposed East Village and East Creekside subareas; and (2) between the closest northern edge of the East Creekside subarea and the remaining northeast portion of SPA "J."

Impact AG-5: Precedent-Setting Impacts on Nearby Agricultural Uses. Approval of the project may eventually result in similar requests by property owners of the remaining northeast portions of SPA "J" to follow the project precedent and revise other segments of the *Urban Limit Line* and redesignate other parcels from *Agricultural Core* to urban use in order to accommodate urban development. Precedent-following conversion of such parcels to urban use would result in further losses of County-designated *Agricultural Core* and actively cultivated prime agricultural land. Such further losses, if they occur, could constitute a ***significant impact*** (see Criteria #1 and #2 under #3. Significance Criteria" above).

Mitigation AG-5: Require a rigorous review process for any such additional request to change the *Urban Limit Line* and/or *Agricultural Core* designations on nearby agricultural lands. Any additional application or request to change the *Urban Limit Line* or the *Agricultural Core* designation would require an amendment to the General Plan. Approval of such changes would require a rigorous review process for each proposed change; the Contra Costa County General Plan identifies a number of findings which must be made in order to approve an *Urban Limit Line* change. A 4/5ths vote of the Board of Supervisors is required for approval of an *Urban Limit Line* change. Any such changes would also require public hearings and environmental review as mandated by state law. Implementation of this measure would be expected to reduce this impact to a ***less-than-significant level***.

C. TRANSPORTATION

This section describes the existing transportation system serving the project site and East Contra Costa County, potential impacts of the project on the operation and safety of that system, and mitigation measures to reduce or eliminate significant impacts. The discussion addresses local streets, collectors, arterials, State Route 4, other routes of regional significance, and local transit service. The impacts and mitigation needs associated with project-generated traffic increases as well as anticipated cumulative traffic increases in the East County are identified. Project internal access and circulation is also evaluated. The transportation study was completed by the EIR transportation engineer, DKS Associates, based on original, project-specific analysis as well as data compilation from previous traffic studies.

1. SETTING

a. Transportation and Growth Issues in Eastern Contra Costa County

- r (1) Existing and Planned Transportation Facilities. As indicated in section IV.A of this EIR, eastern Contra Costa County is one of the fastest growing subregions of the Bay Area. The subregion currently contains predominantly residential ("bedroom") communities, with most workers commuting to employment centers in central and western Contra Costa County, and Alameda County.

State Route 4 (SR 4) is the main access route to and from east county (see Figure 27). Rapid urbanization and heavy pass-through traffic on SR 4 are creating increasing congestion problems in the East County. Pending and anticipated future growth will require more transportation capacity and/or aggressive travel demand management in this corridor. Vasco Road is a rural highway that provides access south to and from Livermore. Although the route has been recently relocated and improved, significant capacity deficiencies are still anticipated.

The capital outlays associated with current transportation improvement needs in eastern Contra Costa County are already substantial, and funding for these current improvement needs is uncertain. The east county communities have recently adopted a regional traffic mitigation fee that will partially fund widening of SR 4 through Pittsburg and Antioch, the SR 4 Bypass, and the Buchanan Road Bypass. The source for the balance of funds needed for identified current subregional roadway needs remains uncertain. Most likely these funds will have to come from federal, state, subregional and local sources as well as developer

contributions and improvements that may become available over the years. There are local sources available to fund local circulation needs in Brentwood, Antioch and Contra Costa

County. The projects that would be funded by these local sources are documented in Table 22 starting on page IV.C-36.

r (2) Traffic Planning Procedures. To ensure consistency among different transportation analyses, two network definitions have been defined: the Measure C Routes of Regional Significance and the Congestion Management Program (CMP) network.

r Measure C defined the Regional Route system to include all portions of the interstate and state highway systems, Ygnacio Valley Road, Treat Boulevard, San Pablo Avenue, San Pablo Dam Road, and Lone Tree Way. Each of the Regional Transportation Planning Committees (WCCTAC, TRANSPLAN, TRANSPAC, and SWAT) may propose additional routes based on specific criteria defined in the Contra Costa Transportation Authority's *Growth Management Program*. A complete description of the Regional Route system for the East County area is contained in the *East County Action Plan*.

r The CMP network is a subset of the network of Routes of Regional Significance. In eastern Contra Costa County, the CMP network consists of State Route 4, State Route 160, Kirker Pass Road, and Railroad Avenue south of State Route 4. In the future, the CMP may be updated to include some or all of the other Routes of Regional Significance and incorporate projects and programs defined in the Measure C Action Plans. A complete description of the CMP network is contained in the *1997 Contra Costa Congestion Management Program Update - Planning Committee Review Draft*.

b. Regional Access

The Cowell Ranch study area is served by the regional roadway system diagrammed on Figure 27. SR 4 provides access from the east and west, running north/south through Brentwood. Marsh Creek Road provides access to the west to Clayton. Byron Highway provides access southeast to Tracy. Vasco Road provides access south to Livermore and I-580. The existing status of these regional routes is described below. Related improvement plans are described in subsection 4.a(2)(b) (see page IV.C-32).

(1) State Route 4. SR 4 extends from Hercules on the west almost to the California/Nevada border on the east. The route is a freeway from just west of Martinez to its junction with SR 160 in eastern Antioch. From eastern Antioch through Oakley, SR 4 is a two- to four-lane, at-grade highway. In the morning peak period, this segment experiences significant congestion along the westbound Antioch portion approaching Willow Pass grade. In the evening, peak period, SR 4 experiences similar eastbound congestion along the east Concord segment approaching Willow Pass grade, as well as east through Pittsburg to Somersville Road in Antioch.

As shown on Figure 27, the segment of SR 4 through Brentwood is a north-south route. North of downtown Brentwood, the route passes through strip commercial and residential development. At the north edge of the downtown, SR 4 follows Spruce Street, then makes a

90-degree turn onto Brentwood Boulevard along the Union Pacific (formerly Southern Pacific Transportation Company) railroad tracks. SR 4 is a four-lane street through the downtown area, with a posted speed limit of 35 miles per hour (mph). The curve at the north end of downtown is posted at ten mph. South of the downtown area, SR 4 runs southeasterly to a junction with Byron Highway, with a posted speed of 55 mph. East of Byron Highway, SR 4 is oriented due east towards Stockton. In downtown Brentwood, SR 4 carries about 25,500 vehicles per day (vpd).¹

Traffic is often congested on these non-freeway portions of SR 4 during peak periods, resulting from high through-traffic flows, interference by high volumes of traffic turning into and out of driveways, and heavy truck volumes. This is especially true in central Brentwood where the same highway is used for parking, pedestrian crossings, commute traffic, and interregional truck movements. The percentage of trucks on SR 4 in the morning commute hour varies from 16 percent near the Contra Costa/San Joaquin County line to 13 percent in Brentwood to five percent near downtown Oakley.²

¹ 1995 *Traffic Volumes on California State Highways*, Caltrans, May 1996.

² Action Plan for Routes of Regional Significance in Eastern Contra Costa County, Final Draft Travel Data Report, prepared for TRANSPLAN by DKS Associates, December 1991.

r = Indicates revised line; i.e., revision to Draft EIR made in response to public comment.

Table 18
FREEWAY AND TWO-LANE HIGHWAY LEVEL OF SERVICE SUMMARY--EXISTING
CONDITIONS

	<u>LOS</u> <u>Standard</u>	<u>AM Peak</u> <u>Hour</u>		<u>PM Peak</u> <u>Hour</u>	
<i>Freeway (peak direction)</i>					
SR 4 west of Lone Tree Way	LOS E	D		E	
<i>Two-Lane Rural Road (2-way traffic volume)</i>					
		<u>LOS</u>	<u>Speed</u> <u>(mph)</u>	<u>LOS</u>	<u>Speed</u> <u>(mph)</u>
SR 4 east of Bixler Road	LOS D	E	45-49	E	45-49
Vasco Road south of Camino Diablo	LOS D	E	45-49	E	45-49
Vasco Road north of I-580 (Alameda)	LOS D	E	45-49	E	45-49
Deer Valley Road north of Marsh Creek Road	LOS D	B	55-57	B	55-57
Deer Valley Road north of Balfour Road	LOS D	C	52-54	C	52-54
Marsh Creek Road west of Deer Valley Road	LOS D	D	50-51	D	50-51
Marsh Creek Road n/e of Camino Diablo	LOS D	C	52-54	B	55-57
Byron Highway south of Camino Diablo	LOS D	D	50-51	D	50-51

SOURCE: DKS Associates, 1994.

- r LOS = Level of Service
- r mph = miles per hour

b. Current Contra Costa County Congestion Management Program

r The CCTA adopted the current County CMP, the 1995 Contra Costa Congestion Management Program Update, on October 18, 1995. The CMP contains several state-mandated components, including a program to analyze the impacts of land use decisions made by local jurisdictions on regional transportation systems. The land use analysis program in eastern Contra Costa County is the growth management portion of the East County Action Plan (see below).

c. East County Action Plan

(1) Background. Contra Costa County's Measure C-1988 Growth Management Program requires all Contra Costa County jurisdictions to participate in the preparation of *Action Plans for Routes of Regional Significance* (Action Plans) to determine appropriate measures and programs for mitigation of regional traffic impacts. The Growth Management Implementation Documents adopted by the CCTA in December 1990 further require that each regional transportation planning committee develop and adopt an *Action Plan for Routes of Regional Significance*.

TRANSPLAN, the regional transportation committee for eastern Contra Costa County, adopted the East County Action Plan on December 8, 1994. The CCTA formally adopted the East County Action Plan on July 19, 1995 by adopting the Countywide Comprehensive Transportation Plan.

The adopted East County Action Plan includes Traffic Service Objectives (TSO) and identified actions for various Routes of Regional Significance. TRANSPLAN developed the TSOs, with companion actions, pursuant to transportation policies, goals, and objectives within eastern Contra Costa County. These TSOs include: 1) Peak Hour Vehicle Occupancy Rates, 2) Delay indexes, and 3) Levels of Service (LOS) requirements for signalized and un-signalized intersections.

d. Contra Costa County and City of Brentwood General Plans

The Circulation and Growth Management Elements of the Contra Costa County and City of Brentwood General Plans contain numerous policies and actions related to transportation. Of particular relevance to this EIR are the Growth Management Element roadway level of service standards which are detailed in subsection 3, "Significance Criteria" below. These level of service standards are for intersection operations on "basic routes" (i.e., routes that are not of "regional significance") and are in conformance with Contra Costa County Measure C (1988) required standards.

e. Conditions for a 21st Century Community

Contra Costa County's Conditions for a 21st Century Community, a set of growth management concepts adopted by the Board of Supervisors, contains the following guidelines that relate to transportation, and particularly to the use of alternative, non-automobile commute modes such as transit. (These represent guidelines rather than adopted County General Plan policy.)

- *Demonstrate use of alternative forms of transportation, especially transit, in order to provide necessary services to transit-dependent persons and to help minimize automobile congestion and air pollution. (Integrated Transportation System, Policy 1)*
- *Provide park-and-ride areas at locations along the arterial street network to serve transit stops and to serve as meeting points for ridesharing. (Integrated Transportation System, Policy 2)*
- *Extend public transit to provide alternative means of access within the subregion and to major off-site destinations. (Integrated Transportation System, Policy 3)*
- *Maximize connections between Class I bicycle trail system and transit hub park and ride lots, transit stops, and future rail transit stations. The pedestrian path and sidewalk system should provide short and convenient routing to schools, commercial areas, park and ride lots, transit stops, and the future rail transit stations. (Integrated Transportation System, Policy 4)*
- *Develop systems of safe and convenient bicycle routes, hiking and riding trails throughout the subregion. (Integrated Transportation System, Policy 5)*
- *Incorporate pedestrian and bicycle paths throughout the project. (Integrated Transportation System, Policy 7)*
- *Maximize the potential for telecommuting by wiring every home for telecommunication and reserving land for telecommuting centers. (Integrated Transportation System, Policy 8)*
- *Provide for an overall project design that will accommodate efficient and convenient transit routing and maximize transit ridership. (Integrated Transportation System, Policy 14)*
- *Encourage and maximize the use of alternative travel needs by providing connectivity between the various transportation facilities (pedestrian, bicycle, auto, transit, fixed guideway) and by providing a public education system advising residents of commute alternatives and transit opportunities. (Integrated Transportation System, Policy 15)*
- *Develop a circulation network of neighborhood streets that minimizes heavy through-traffic, while at the same time providing a network of streets conducive to transit routing. (Internal Road System, Policy 1)*

f. Principles and Guidelines for Cowell Ranch

- The Principles and Guidelines for Cowell Ranch document adopted by the Contra Costa County Board of Supervisors contains the following guidelines that relate to transportation.
- (These represent guidelines rather than adopted County General Plan policy.)
- *The circulation system should be designed to reduce dependency on the automobile principally through (i) a compact arrangement and mix of land uses, (ii) a trail system and street network that encourages walking and bicycling for purely local trips, and (iii) provision for future transit systems, bus stops, and park and ride facilities. (Guideline 3.b)*
 - *Cowell Ranch should be designed as an open, non-exclusive community that will become a distinct district within Brentwood with physical connections to the surrounding community through the local road network, transit services, the Marsh Creek Corridor Trail System and other trails. (Guideline 3.d)*

g. Regional Policies

- The Association of Bay Area Governments (ABAG) is a regional planning agency that does not have a regulatory role or regulatory jurisdiction over the project. However, the ABAG policies do warrant consideration for this project. The most recent regional policy document prepared by ABAG, entitled A Proposed Land Use Policy Framework for the San Francisco Bay Area and adopted by the ABAG Executive Board in July 1990, contains policies to "direct growth where regional infrastructure capacity, such as freeway (and) transit,...is available or committed..." and to "allow for the development of new communities along transit corridors where interurban transit service and capacity are available or committed when they would be consistent with regional or subregional goals and objectives, and (will) not negatively affect existing communities."

3. SIGNIFICANCE CRITERIA

a. General Significance Criteria

Based on Appendix G of the CEQA Guidelines,¹ a project transportation impact is considered to be *significant* in this EIR analysis if:

- the project-related transportation system changes will conflict with an adopted plan or goal of the county or city pertaining to transportation, including violation of an applicable level-of-service standard, or
- the impact involves an increase in traffic which is *substantial* in relation to the existing traffic load and capacity of the street system.

¹State Office of Planning and Research, CEQA Guidelines, Appendix G, items a and I; 1995.

were prepared by the EIR consultants for areas of the region outside of Contra Costa County and by the Contra Costa County Community Development staff for areas within the county.

Table 20 summarizes the model household assumptions and Table 21 shows model employment assumptions applied in the model by area for 1990 (the model calibration year), 2010 (the project Phase I year), and 2026 (the project Phase II year). The following growth projections are indicated.

- r ▪ **Households.** Overall, a growth of about 65,500 households, or 116 percent is assumed to occur in the East County between 1990 and 2026. For the County as a whole, the growth is expected to total approximately 131,366 households, or 44 percent.
- r ▪ **Employment.** Employment growth to year 2026 in the East County is expected to be about 53,600 jobs, or about 160 percent over 1990 levels. The projected countywide total growth increment is about 135,600 jobs (45 percent).
- r

(b) *Offsite Transportation Network Assumptions.* Since the proposed project would be built over the course of many years, the EIR transportation analysis recognizes that a number of specific improvements to the East County transportation system are likely to occur during that time. DKS Associates in collaboration with Contra Costa County Community Development Department staff has developed assumptions regarding the offsite transportation network that would be in place by the years 2010 and 2026. Table 22 lists a number of roadway improvements assumed to be in place by 2010 and by 2026. In general, this improvements list is consistent with the Regional Transportation Plan (RTP)¹ and the East Contra Costa Transportation Strategic Plan (Working Paper #1).² In addition, local improvements that could be expected to be funded by the amount of development assumed by year 2010 have also been included. Funding for some of the transportation improvements is dependent upon development that is anticipated to occur by 2010.

Additional transportation provisions assumed to be provided by the project sponsor are also included in the analyses for the year 2010 and 2026 scenarios that involve the with-project condition. These are described in section III, Project Description (see pages III--23-31, 33-34).

(c) *Study Area Definition.* Early in the EIR process, DKS conducted a preliminary "screening" analysis using the East County Model to determine which local and regional intersections would receive 50 or more peak hour project vehicle trips. This threshold is based on the Contra Costa Transportation Authority's *Technical Procedures* for traffic studies involving development that generates more than 100 peak hour trips. For purposes of conservative ("worst case") screening analysis assessment, the model was run in this

¹Metropolitan Transportation Commission, *Regional Transportation Plan*, 1994.

²*East Contra Costa Transportation Strategic Plan, Working Paper 1*, prepared for East Contra Costa Regional Fee & Finance Authority by Smith and Kempton.

Table 21

SUMMARY OF EMPLOYMENT ESTIMATES—YEARS 1990, 2010, AND 2026

<u>Area</u>	<u>Number of Jobs</u>		
	<u>1990</u>	<u>2010</u>	<u>2026</u>
Incorporated:			
Antioch	12,649	26,620	29,344
Brentwood	2,947	16,332	16,332
Pittsburg	15,630	26,452	26,452
Rural East County	2,354	10,450	15,057
Total East County	33,580	79,854	87,185
West County	64,865	89,574	93,034
Central County	163,224	199,009	197,098
Tri-Valley (Contra Costa Portion)	39,601	59,650	59,508
Total Contra Costa	301,270	428,087	436,825
Cowell Ranch Project	--	5,485	6,628

SOURCE: Contra Costa Transportation Authority (1990 and 2010), Contra Costa County Community Development Department (for incorporated and rural east county 2026 projections), and Wagstaff and Associates (for other year 2026 projections).

Table 24

AM PEAK HOUR TRIP DISTRIBUTION--VEHICLE TRIPS: PHASE I - YEAR 2010

<u>Location</u>	<u>Year 2010</u>		<u>Total</u>	<u>Percentage</u>
	<u>In</u>	<u>Out</u>		
r Cowell Ranch	171	171	342	12.5
r Brentwood	274	583	857	31.4
r Oakley/Bethel Island	33	244	277	10.2
r Antioch	135	346	481	17.6
r Pittsburg	43	51	94	3.4
r Rest of East County	56	233	289	10.6
r Rest of Contra Costa	44	42	86	3.2
r San Ramon	6	10	16	0.6
r Dublin/Pleasanton/Livermore	40	21	61	2.2
r Stockton/Lodi	31	34	65	2.4
r Tracy/Mnt. House/Manteca	28	3	31	1.1
r Other (Outside Contra Costa)	<u>75</u>	<u>54</u>	<u>129</u>	<u>4.7</u>
r TOTAL	936	1,792	2,728	100.0

SOURCE: DKS Associates, 1996.

Table 25

AM PEAK HOUR TRIP DISTRIBUTION--VEHICLE TRIPS: PHASE II - YEAR 2026

	<u>Location</u>	<u>Year 2026</u>		<u>Total</u>	<u>Percentage</u>
		<u>In</u>	<u>Out</u>		
r	Cowell Ranch	425	425	850	16.9
r	Brentwood	582	782	1,364	27.0
r	Oakley/Bethel Island	97	389	486	9.6
r	Antioch	320	426	746	14.8
r	Pittsburg	132	72	204	4.0
r	Rest of East County	153	367	520	10.3
r	Rest of Contra Costa	140	59	199	3.9
r	San Ramon	12	13	25	0.5
r	Dublin/Pleasanton/Livermore	86	50	136	2.7
r	Stockton/Lodi	85	53	138	2.7
r	Tracy/Mnt. House/Manteca	67	29	96	1.9
r	Other (Outside Contra Costa)	<u>196</u>	<u>84</u>	<u>280</u>	<u>5.6</u>
r	TOTAL	2,295	2,749	5,044	100.0

SOURCE: DKS Associates, 1996.

The project payment of the regional traffic impact fee will satisfy this obligation for its contribution to cumulative traffic impacts if the County's Capital Improvement Plan (CIP) and the CIPs of other affected jurisdictions demonstrate that those fees and other funding sources will be sufficient to comply with the traffic performance standards.

This performance standard-based mitigation measure has been formulated to be consistent with and to further adopted Contra Costa County General Plan Goals 3-6 and 3-7, Policies 4-1 and 4-3, and Implementation Measures 4-a, 4-f, 4-k, 4-m, 4-n, 4-p(a) and 4-p(b).

Based on the traffic modelling that has been conducted for this EIR, it appears that completion of the roadway improvement measures listed in Tables 32 and 33 (at the end of this section) and described below would eventually be necessary for each project phase prior to occupancy of associated housing and employment uses.

r If, for a particular roadway system level of service impact, it is determined by the County (or
r City) that compliance with the applicable performance standard is infeasible (e.g., due to lack
of funding for the necessary roadway or intersection improvements), but the resulting
unavoidable adverse level of service impact is considered acceptable because the benefits of
the project outweigh the impact, section 15093 of the CEQA Guidelines permits the County (or
City) to allow the impact if it states in writing the specific reasons to support its action (a
Statement of Overriding Considerations).

(b) Specific Improvements to Offsite Roadways. The roadway link improvement measures listed below would eventually be necessary to accommodate project **Phase I** and **Phase II** prior to occupancy of associated residential and employment uses. The County should condition project approval upon applicant contribution toward implementation of these mitigation measures. The project applicant's participation in this measure should be based on its proportionate share of the impact. The Contra Costa County Community Development Department would be responsible for implementing this roadway improvement measure when the impact on facility function is at the threshold of significance. The Contra Costa County Community Development and Public Works Departments would be responsible for monitoring the success of this mitigation measure.

- **SR 4 Freeway.** The SR 4 freeway is planned ultimately to be widened to eight lanes (six mixed flow plus two HOV lanes). The EIR analysis has assumed that SR 4 would be widened from Bailey Road to Railroad Avenue by the time Phase I was complete, but that the project would substantially increase traffic levels on the unwidened section of freeway from Railroad Avenue to the SR 4 Bypass, which is expected already to be operating at LOS F. A mitigation for this impact would be to require that the planned future widening of this section of SR 4 to eight lanes (six mixed flow plus two HOV) be completed before **Phase I** of the project is completed. The EIR analysis indicates that this measure would mitigate the impact of Phase I on the SR 4 freeway to a less-than-significant level.

- *Vasco Road.* Vasco Road is expected to operate at LOS F conditions without or with the project under both Phase I and Phase II conditions. Widening this road would reduce the impact, but not to a less-than-significant level. Widening Vasco Road to four lanes is a controversial and expensive prospect in Alameda County, and is considered in this EIR to be practically and politically infeasible through that County. Thus, it appears that project Phases I and II as proposed would have an ***unavoidable significant adverse impact*** on Vasco Road.
- *Deer Valley Road, North of Balfour Road.* This portion of Deer Valley Road is currently a rural two-lane facility. Widening the road to four lanes from Balfour Road to the Antioch city limit would be consistent with the City of Brentwood's Roadway Master Plan, which forms the basis for the City of Brentwood's *traffic impact mitigation fee*. This funded widening would reduce the project's impact on Deer Valley Road to a ***less-than-significant level***.
- *Byron Highway, South of Camino Diablo.* Byron Highway links eastern Contra Costa County to Tracy, and is expected to operate at LOS F conditions in both 2010 and 2026, with or without the project. Mitigation of the project's impact would require either widening Byron Highway to four lanes or constructing a second route. Caltrans has developed a Route 239 concept that would provide additional capacity in the corridor, but this concept is not yet planned or funded. The Altamont Interregional Corridor Transportation Study¹ has recommended further investigation of this improved connection. Widening Byron Highway to four lanes would reduce the project's impact on this route to a ***less-than-significant level***.
- *Camino Diablo, East of Vasco Road.* This portion of Camino Diablo would operate at LOS E in the PM peak hour with or without the project. The project would add a relatively small amount of traffic to this route. Widening Camino Diablo to four lanes between Vasco Road and Byron Highway would reduce this project impact to a ***less-than-significant level***.
- *Balfour Road, from Concord Avenue to SR 4 Bypass.* The proximity of intersections at Concord Avenue and SR 4 Bypass, together with improvements at each intersection, creates an operational constraint between intersections. Widening Balfour Road between Concord Avenue and SR 4 Bypass would reduce the project's impact on Balfour Road to a ***less-than-significant level***.
- r ▪ *State Route 4 Bypass from Lone Tree Way to Marsh Creek Road.* The SR 4 Bypass would be a two-lane expressway from Lone Tree Way to Marsh Creek Road in 2010. Mitigation of impacts on intersections with the SR 4 Bypass south of Lone Tree Way (Sand Creek Road, Balfour Road, Concord Avenue, and Marsh Creek Road) would all require widening the Bypass to four through lanes with or without the project. Extending the four-lane segment of the State Route 4 Bypass from Lone Tree Way to Marsh Creek

¹Ibid.

Road would reduce the impacts on this segment of the Bypass to a ***less-than-significant level***.

(c) *Specific Improvements to Offsite Intersections.* Tables 32 and 33 (located at the end of this section) list improvements that would serve as mitigation measures for project-related traffic impacts on offsite intersections. The applicant would be responsible for providing fair share funding for some of these improvement measures and providing full funding for others. Partial funding responsibility has been assigned where a deficient condition would exist without the project, and the project would exacerbate the deficient condition. Full funding responsibility has been assigned when a deficient condition would be created by the project. The distinction between these two cases has been previously indicated on pages IV.C-49, 52 and 53. Tables 32 and 33 indicate the distinction in mitigation responsibility by assigning the code "PO" to indicate "project-only" responsibility, and "PFS" to indicate "project fair-share" responsibility.

Responsibility for implementing the improvements would lie with either the County, City, Caltrans, or a consortium of agencies. The County (or City) would be responsible for establishing a financing mechanism to enable the indicated improvements to be implemented.

Mitigation measures in Table 32 (year 2010 conditions) indicate that two intersection impact locations, the State Route 4 Bypass/Laurel Road intersection and the State Route 4 Bypass/Lone Tree Way intersection, can be mitigated with extensive intersection widening. Alternatively, impacts at these intersections can be mitigated with the construction of interchanges (planned for implementation before 2026) at Laurel Road and Lone Tree Way. If neither of these improvements is feasible by the completion of Phase I of the project, the project would have ***significant unavoidable impacts***.

Mitigation measures in Table 33 (year 2026 conditions) indicate that two intersection impact locations, Lone Tree Way/James Donlon Boulevard and State Route 4 Bypass/Balfour Road, can be mitigated with further intersection widening. Alternatively, the impact at State Route 4 Bypass/Balfour Road can be mitigated with the construction of an interchange (planned for implementation after 2026). If it is determined that these intersections cannot feasibly be widened (or in the case of SR 4 Bypass/Balfour Road construct an interchange by completion of Phase II of the project), the project would have a ***significant unavoidable impact***.

(d) *Travel Demand Management Measures.* Travel demand management (TDM) measures are used to reduce the amount of project-generated travel by single-occupant automobiles, especially during peak periods of travel. TDM measures may be used to alleviate traffic congestion, air quality deficiencies, or both. Such measures might take the form of institutional programs, provision of new transit or transit linkage service, or changes in project site design.

the nature of year 2026 cumulative development, it is necessary for this EIR in its evaluation of available technical data to make a more general and qualitative assessment of the cumulative traffic and circulation impacts from development in the Brentwood area.

The Brentwood General Plan designates Special Planning Areas (SPAs) "G," "H," "I," and "J" south of Balfour Road for urban development. More specific preliminary planning is underway for some of these SPAs by the City of Brentwood. Development of these SPAs will contribute to cumulative traffic congestion along this section of Balfour Road and potentially to the route's proposed grade-separated crossing of the State Route 4 Bypass connecting the City of Brentwood with the North Hills area of Cowell Ranch ("M" Street).

Mitigation T-2: The County should require the project to preserve the opportunity for a new east-west arterial south of Balfour Road by dedicating right-of-way on Briones Valley Road along the project's frontage for an ultimate four-lane arterial. The new east-west arterial would connect Deer Valley Road and the Fairview Avenue extension in the Briones Valley Road corridor. Refinement of this mitigation measure should occur as part of Brentwood's planning for SPAs "G," "H," "I," "K," and the remainder of "J." This measure would reduce the impact to a *less-than-significant level*.

The Contra Costa County Community Development Department and the Public Works Department would be responsible for implementing this measure when the City of Brentwood initiates environmental review and annexation requests to LAFCO for the SPAs. The Contra Costa County Community Development and Public Works Departments would also be responsible for monitoring the success of this mitigation measure.

Mitigation T-3: Require the applicant to dedicate adequate right-of-way for an ultimate four-lane arterial (110 feet) along Camino Diablo between Marsh Creek Road and Walnut Boulevard, and construct the necessary horizontal and vertical realignments and intersection channelization to accommodate the revised travel patterns created by traffic diverted from the closure of Marsh Creek Road. Mitigations for traffic increases at the Marsh Creek Road/Walnut Boulevard and Camino Diablo/Byron Highway intersections are identified above (see *Mitigation T-1*). These measures would reduce the project impact to a ***less-than-significant level***.

Impact T-4: Increase In Urban Traffic on Concord Avenue through the *Agricultural Core*. The project would create the potential for increased traffic intrusions into the County-designated *Agricultural Core* area due to roadway connections to the project at Fairview and Concord Avenues (see Figures 34 and 35). A comparison of auto demand volumes between project and no-project conditions shows a project 98-percent increase in the AM peak hour and a 92-percent increase in the PM peak hour volumes for 2010, and a 68-percent increase in the AM peak hour and 55-percent increase in the PM peak hour for 2026 on this Fairview/Concord Avenue segment. Additionally, the Concord Avenue/SR 4 Bypass intersection will operate at LOS E (0.97) in the AM peak hour and LOS F (1.16) in the PM peak hour in the year 2010 without the project, and at LOS F (1.23) in the AM peak hour and LOS F (1.36) in the PM peak hour with the project. Concord Avenue east of the project site is currently a rural two-lane farm road without shoulders and is not designed to accommodate both rural and urban traffic volumes. These increases are therefore considered to represent a ***potentially significant impact*** (see subsection (c) under "3. Significance Criteria" above).

Mitigation T-4: As a condition of approval, the potential for increased traffic intrusions into the County-designated *Agricultural Core* area shall be mitigated by closing Concord Avenue at the Marsh Creek bridge when development occurs west of the bridge, or increased traffic occurs. The bridge will only be used as an emergency vehicle access (EVA) after it is closed. Closure of Concord Avenue shall occur in consultation with PG&E and the County to ensure to County satisfaction that adequate industrial equipment truck access to and from the existing PG&E Gas Terminal and Compressor Station is provided by this or an alternative route. This measure would reduce the impact to a ***less-than-significant level***.

The closure of the Concord bridge at Marsh Creek will remove urban through traffic on Concord Avenue through the *Agricultural Core*. Agricultural uses along Concord Avenue would continue to have access to Walnut Boulevard to the east and Marsh Creek Road to the south via Orchard Lane.

the southbound portion of the Fairview Avenue extension into the Cowell Ranch project via an over- or under-crossing, or connecting Concord Avenue with the southbound Fairview Avenue

e. Onsite Roadway Circulation Impacts

The proposed project circulation plan (see Figure 9 in section III, Project Description) has been reviewed for compliance with applicable standards and adequacy in providing for internal circulation. Generally, the plan appears to provide adequate internal circulation between project subareas, and to the street systems of Brentwood and the rest of eastern Contra Costa County. However, the following specific potential adverse impacts have been identified:

Impact T-6: Safety Impacts Due to Inadequate Pedestrian Access to School Sites.

Collector streets adjoining the proposed elementary and middle school sites would not contain sidewalks on both sides of the street. The project circulation plan also does not specify provisions for street widening or off-street zones for automobile drop-off and pick-up of students. These conditions would constitute a ***potentially significant impact*** (see subsection (c) under "3. Significance Criteria" above).

Mitigation T-6: Require the project to submit proposed onsite roadway designs and pedestrian crossings adjacent to school sites to Contra Costa County Public Works Department for review and acceptance prior to any Final Development Plan approval. This measure would reduce the impact to a ***less-than-significant level***.

Pedestrian access to school sites should be focused on secondary and local roads. Pedestrian access requiring students to cross major arterial roadways to access schools should be minimized. Automobile access to school sites should also be provided from secondary collector and local roads.

Impact T-7: Safety Impact Due To Cul-De-Sac Length In Planning Area 32. The approximately 1,400-foot-long southwestern cul-de-sac in Planning Area 32 would be too long to allow efficient ingress and egress by emergency vehicles, trash collection vehicles, and other vehicles. This condition would constitute a ***potentially significant safety impact*** (see subsection (c) under "3. Significance Criteria" above).

Generally, cul-de-sacs should be no longer than 600 feet. Longer cul-de-sacs make provision of emergency services difficult, and ingress and egress by trash collection services and other vehicles less efficient.

It should be noted that the project proposes an emergency vehicle access to Planning Area 32 via a connection to Briones Valley Road (see Figure 8 in section III, Project Description).

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landscaped median. Landscape strips, sidewalks and bike paths would also be provided. It is not clear from the circulation plan which design standard is to be applied in which locations.

Contra Costa County requires 14-foot travel lanes adjacent to hard medians. The divided arterial does not meet these standards. The City of Brentwood requires a 120-foot right-of-way for a major thoroughfare. The widest cross-section proposed by the project (122 feet) would meet the City standard, while the smaller cross-sections (86 feet, 102 feet, and 112 feet) would not meet the City standard.

Although the divided four-lane arterial would not meet the City of Brentwood right-of-way standard and County lane requirements, it would be adequate to accommodate four-lane arterial traffic volumes.

Mitigation T-10: Require the project applicant to submit the proposed *Cowell Ranch P-1 Planned Unit District Development Standards* to the Contra Costa County Public Works Department (or to the City of Brentwood, if the project is annexed to the City) for review and approval prior to approval of any Final Development Plan. The initial submittal shall include a revised circulation plan that describes the location and configuration of proposed roadways, including their functional classification and design standards. This measure would reduce the impact to a ***less-than-significant level***.

The project applicant is solely responsible for implementation of this measure since the impact only occurs with the project. The Contra Costa County Community Development and Public Works Departments (or the City of Brentwood, if the project is annexed to the City) would be responsible for monitoring the success of this mitigation measure.

Safety Impacts Due To Intersection Spacing. The spacing of intersections for circulation adequacy was evaluated for the primary project roadways. Because there are no County standards for intersection spacing, City of Brentwood standards were used for this evaluation. The project would comply with the City of Brentwood standard for 600-foot spacing between intersections of local and collector streets with arterial streets. Safety impacts due to intersection spacing would therefore be ***less-than-significant*** (see subsection (c) under "3. Significance Criteria" above).

Mitigation for Safety Impacts Due To Intersection Spacing. No significant impacts have been identified, and therefore no mitigation is required.

f. Pedestrian and Bicycle Circulation Impacts

Impact T-11: Impacts on Pedestrian and Bicycle Circulation. The proposed street cross-sections include sidewalks on all roadways except some local streets. The village plan is compact, and conducive to pedestrian circulation. Bike paths would be provided on arterial and non-urban collector streets. The urban collector would contain a four-foot-wide bike lane on one side only, adjacent to a parking lane, which would not be consistent with County design standards. It is not clear from the circulation plan which bicycle facility would be provided where and how they would connect. There is a potential for pedestrian and bicycle conflicts on joint use paths where no parallel bike lane is provided. These conditions represent a **potentially significant impact** (see subsections (c) and (d) under "3. Significance Criteria" above).

Mitigation T-11: Require the project applicant to submit the proposed *Cowell Ranch P-1 Planned Unit District Development Standards* to the Contra Costa County Public Works Department for review and approval prior to approval of any Final Development Plan. The initial submittal shall include a revised circulation plan that describes the location and configuration of proposed bicycle and pedestrian facilities including their design standards. This measure would reduce the impact to a **less-than-significant level**.

The project proponent is solely responsible for implementation of this measure since the impact only occurs with the project. The Contra Costa County Community Development and Public Works Departments would be responsible for monitoring the success of this mitigation measure.

g. Transit Service Impacts

Impact T-12: Adequate Transit Service. The project has the potential to substantially increase demands for transit service. Provision of adequate transit service to the Cowell Ranch area is not assured. This possible transportation deficiency represents a **potentially significant impact** (see subsection (e) under "3. Significant Criteria" above).

The *Cowell Ranch P-1 Planned Unit District Development Standards* (March 25, 1996) proposed by the project applicant indicates the following with respect to transit:

3.2 Bus Routes & Bus Stops

The Circulation Plan anticipates the North and East Villages will serve as the focal point of transit service to Brentwood and regional transportation corridors. Shuttle buses or demand-responsive vans could carry passengers from Cowell Ranch to downtown

Brentwood, a proposed commuter rail line facility, BART terminal stations, and major employment centers in the surrounding region.

Bus stops will be provided, as required in the development process.

If implemented, these concepts could be effective in encouraging transit use; however, the language is not strong enough to ensure that the concepts would be developed. Under the current development plan, provision of shuttle services would be under the control of the applicant or ultimate individual developer, as would the provision of bus stops. Provision of the actual bus service, however, would be the function of a local transit agency, which may or may not have the resources to serve the project. This uncertainty is exacerbated by the relatively remote location of the Cowell Ranch project compared to other developed and developing areas that might be served by transit.

Failure to provide adequate transit service would have the potential to conflict with Contra Costa County and City of Brentwood policies that advocate alternative transportation systems, including Contra Costa County General Plan Circulation Element Policy 5-20, which states that "all efforts to use alternative transportation systems to reduce peak period traffic congestion shall be encouraged."

Mitigation T-12: Conditions for approval of the project should include language requiring provision of shuttle services to regional transit systems, requiring the developer to conform to Tri-Delta Transit (or other transit provider) requirements for provision of transit service, and requiring applicant establishment of a Transportation Demand Management (TDM) program to promote transit use incentives. This measure would reduce the transit impacts of the project to a ***less-than-significant level***, provided that Tri-Delta Transit or another transit provider is able to extend service to the site. If no transit provider can afford to serve the site, the unmet demand for transit service and associated impacts on traffic congestion would remain a ***significant unavoidable impact***.

Table 28 (cont.)

Intersection	Without Project				Project-Phase I				Node No.	Significant Impact?	Mitigated?
	AM		PM		AM		PM				
	Peak Hour		Peak Hour		Peak Hour		Peak Hour				
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS			
O'Hara Ave/Lone Tree Way	0.79	C	0.90	D	0.79	C	0.88	D	4188	--	--
Empire Ave/Lone Tree Way	0.73	C	0.76	C	0.78	C	0.81	D	4219	--	--
SR 4 Bypass/ Laurel Rd (S)	1.68	F	1.63	F	1.69	F	1.66	F	5517	Yes	Yes* Mitigation T-1 text
SR 4 Bypass/ Lone Tree Way (S)	1.08	F	1.24	F	1.09	F	1.25	F	5513	Yes	Yes* Mitigation T-1 text
Byron Highway/Camino Diablo	0.89	D	0.89	D	0.86	D	1.02	F	3539	Yes	Yes Mitigation T-1 (see Table 32)
Fairview Ave/Lone Tree Way	0.81	D	0.91	E	0.83	D	0.94	E	4189	Yes	Yes Mitigation T-1 (see Table 32)

SOURCE: DKS Associates, 1996.

V/C: Volume-to-Capacity Ratio

LOS: Level of Service

(S): Signalized Intersection

*: Significant unavoidable impact if mitigations are not feasible by 2010.

r Primary Locations: Intersections likely to be most affected by the project (see discussion in subsection 4.a(2)(c)).

r Secondary Locations: Intersections located outside the project area that may still be affected by the project (see discussion in
r subsection 4.a(2)(c)).

Table 29 (cont.)

Intersection	Without Project				With Project Buildout				Node No.	Significant Impact?	Mitigated?
	AM		PM		AM		PM				
	Peak Hour		Peak Hour		Peak Hour		Peak Hour				
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS			
SR 4 Bypass SB Ramp/ Laurel Rd (S)	0.56	A	0.70	B	0.56	A	0.68	B	5506	--	--
SR 4 Bypass SB Ramp/ Lone Tree Way (S)	0.45	A	0.68	B	0.41	A	0.70	B	5513	--	--
SR 4 Bypass NB Ramp/ Lone Tree Way (S)	0.57	A	0.60	A	0.47	A	0.62	B	5514	--	--
Byron Highway/Camino Diablo	1.05	F	0.99	E	1.09	F	0.99	E	3539	Yes	Yes Mitigation T-1 (see Table 33)
Fairview Ave/Lone Tree Way	0.73	C	0.88	D	0.70	B	0.90	D	4189	--	--

SOURCE: DKS Associates, 1996.

V/C: Volume-to-Capacity Ratio

LOS: Level of Service

(S): Signalized Intersection

*: Significant unavoidable impact if mitigation is not feasible.

r Primary Locations: Intersections likely to be most affected by the project (see discussion in subsection 4.a(2)(c)).

r Secondary Locations: Intersections located outside the project area that may still be affected by the project (see discussion in subsection 4.a(2)(c)).

r

Table 30

TOTAL TRAFFIC VOLUME AT OUT-OF-AREA INTERSECTIONS: YEAR 2010 CONDITIONS WITH AND WITHOUT PHASE I PROJECT

Location	AM Peak Hour					PM Peak Hour				
	Without Project			Change in		Without Project			Change in	
	V/C	LOS	Volume	Volume	Percent	V/C	LOS	Volume	Volume	Percent
r Kirker Pass Rd/Clayton Rd	0.98	E	5,420	+10	0.2%	1.02	F	6,206	+69	1.1%
r Cowell Rd/Ygnacio Valley Rd	1.05	F	5,255	<-78>	<-1.5>%	1.32	F	5,696	+56	1.0%
r Kirker Pass Rd/Concord Blvd	1.01	F	4,686	<-35>	<-1.87>%	0.90	D	4,449	+10	0.2%
r Concord Blvd/Clayton Rd	0.40	A	1,512	+20	1.3%	0.42	A	1,923	+56	2.8%
r Treat Blvd/Clayton Rd	1.10	F	4,985	<-91>	<-1.8>	1.09	F	5,637	+97	1.7%
r Treat Blvd/Cowell Rd	1.29	F	4,385	+31	0.7%	0.96	E	5,295	+181	3.4%

SOURCE: DKS Associates, 1996.

V/c: Volume-to-Capacity Ratio

LOS: Level of Service

Volume: number of vehicles

Table 31

TOTAL TRAFFIC VOLUME AT OUT-OF-AREA INTERSECTIONS: YEAR 2026 CONDITIONS WITH AND WITHOUT PROJECT BUILDOUT

Location	AM Peak Hour					PM Peak Hour				
	Without Project			Change in		Without Project			Change in	
	V/C	LOS	Volume	Volume	Percent	V/C	LOS	Volume	Volume	Percent
r Kirker Pass Rd/Clayton Rd	0.84	D	5,581	<-69>	<1.2>	1.21	F	6,678	+86	1.3
r										
r Kirker Pass Rd/Concord Blvd	1.12	F	5,189	<-152>	<2.9>	1.07	F	5,770	+84	1.5
r Concord Blvd/Clayton Rd	0.38	A	1,409	<-16>	<1.1>	0.39	A	1,771	+15	0.8
r										

SOURCE: DKS Associates, 1996.

V/c: Volume-to-Capacity Ratio

LOS: Level of Service

Volume: number of vehicles

D. SOILS AND GEOLOGY

The following section describes existing soils and geologic conditions on the project site, environmental goals and policies related to soils and geology, criteria for determining the significance of geotechnical impacts, potential project impacts related to soils and geologic conditions, and measures warranted to address identified significant impacts. The descriptions have been developed by the EIR geotechnical consultant, Miller Pacific Engineering Group, based on review of previously performed geotechnical and geologic evaluations of the project site, review of selected geologic literature and maps pertaining to the project area, aerial photograph interpretation of the project site, and limited onsite geologic and geotechnical reconnaissance.

1. SETTING

a. Previous Investigations

Previous soils and geology investigations pertinent to consideration of the project are described below:

(1) Marsh Creek Dam Study. An evaluation of the stability of the Marsh Creek Dam, located immediately offsite at the northern end of the Marsh Creek Reservoir, was performed in 1981 by the California Department of Water Resources (DWR).¹ The purpose of the report was to evaluate the integrity of the dam for continued use as a flood control structure, using 1981 design criteria.

r (2) Los Vaqueros Dam Studies. Local geological reports were prepared in 1978 by the
r DWR² and in 1988 by Woodward-Clyde Consultants³ for the proposed Los Vaqueros Dam to
r be located approximately six miles southeast of the site. These reports mapped the faults that

¹California Department of Water Resources, 1981, Phase 1 Inspection Report for Marsh Creek Dam, Division of Safety of Dams.

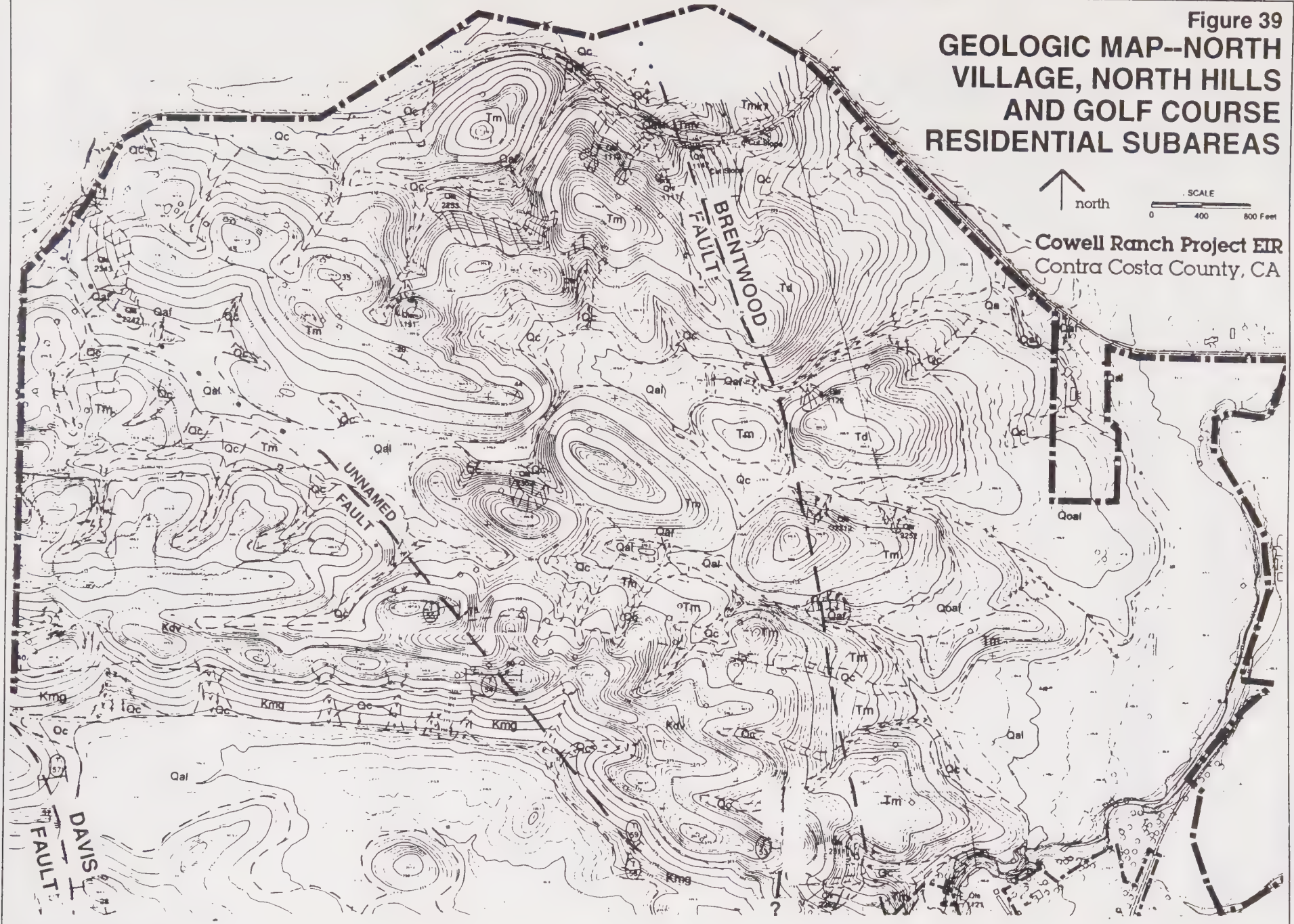
²California Department of Water Resources, 1978, Preliminary Report Faults and Seismicity at Los Vaqueros Dam Site, Project Geology Section: California Department of Water Resources, p.49, 32 trench logs, 6 Plates.

r ³Woodward-Clyde Consultants, 1988, Seismic Hazard Assessment--Los Vaqueros Dam, 117 p. with
r tables, plates, and appendices.

traverse the Cowell Ranch property and analyzed their seismicity and future ground shaking potential.

(3) Onsite Geotechnical Studies. The most recent geotechnical study of the area is the 1991 Preliminary Engineering Geologic and Geotechnical Evaluation, prepared for the project

Figure 39
GEOLOGIC MAP--NORTH
VILLAGE, NORTH HILLS
AND GOLF COURSE
RESIDENTIAL SUBAREAS



Cowell Ranch Project EIR
Contra Costa County, CA

near the existing paddock area southeast of the Marsh Creek Dam site, tilted fence posts are evidence of soil creep along a slope as gentle as approximately 6 to 1 (horizontal to vertical; i.e., about 10 degrees). Soil creep can be accelerated by the construction of fill on slopes, steepening of natural slopes with cuts, and periods of heavy rainfall or increased irrigation. The high shrink-swell potential of many of the site soils also contributes to the prevalence of soil creep. Additionally, construction of roadways near creeks can concentrate surface runoff, disturb or damage riparian vegetation, and increase the potential for soil creep on creek banks.

h. Seismicity

(1) Earthquake Faults in the Region. Earthquakes occur frequently in the seismically active Bay Area. Earthquakes along any of several nearby faults in the region will cause moderate to strong ground shaking at the project site.

The California Division of Mines and Geology¹ (CDMG) has mapped faults and fault activity in the region. Faults with evidence of Holocene displacement or movement over the last 11,000 years in the region include the Calaveras, Clayton, Concord, Green Valley, Greenville, r Hayward, Marsh Creek, Rodgers Creek, and San Andreas faults. Figure 41 shows the r locations of surface faults affecting ground shaking potentials at the project site.

The Antioch fault has been mapped from downtown Antioch to within one mile of the site by various individuals. Some of these mappings have shown the Antioch fault connecting to the onsite Davis fault.² However, extensive, more definitive trenching in the area, including the

¹California Department of Conservation, Division of Mines and Geology, Fault Activity Map of California and Adjacent Areas, California Geologic Data Map Series, Map No. 6, compiled by Charles W. Jennings, 1994.

²Brabb, 1971; Dibblee, 1980.

project site, performed by the Department of Water Resources in 1978, determined that no connection exists between the two faults.

The CDMG has designated certain segments of faults that show evidence of Holocene fault displacement or movement over the last 11,000 years as "active" *Alquist-Priolo Earthquake Fault Zones* (AP Zones) warranting special land use controls and investigation prior to urban development. These zone designations are subject to periodic update, so that existing faults may be deleted and new faults may be included after periodic review by the CDMG. In the past, there has been some question as to whether the Antioch fault should be designated as an AP Zone. The Antioch fault was included in a 1976 AP Zone on the basis of fault creep evidence in the City of Antioch.¹ Since that time, numerous consulting geologists have investigated the fault, but none has found convincing evidence for Holocene offset,² the minimum requirement for a fault to be categorized as "active" and included within a designated AP Zone. The CDMG³ has reviewed the evidence for Holocene movement and concluded that it is not "sufficiently active and well defined" for designation as an AP Zone.⁴

r Seismic activity in the region has also been attributed to a system of faults along the east
r flank of the coast ranges that has been referred to as the Coast Range-Central Valley
r Geomorphic Boundary (recently discussed by Caltrans,⁵ Wakabayashi and Smith⁶, Wong
r and Biggar⁷). Because most of the faults within the Coast Range-Central Valley Geomorphic
r Boundary are concealed or "blind" with no evidence of Holocene surface displacement, the

¹Burke, D.B., and Helley, E.J., 1973, Map showing evidence for recent fault activity in the vicinity of Antioch, Contra Costa County, California: U.S. Geological Survey, Department of Housing and Urban Development Basic Data Contribution No. 60.

²Wills, C.J., 1991, *The Antioch Fault, Contra Costa County, California*, California Division of Mines and Geology Fault Evaluation Report FER-228, p.28, 5 Figures, Plate, unpublished.

³Ibid.

⁴Hart, E.W., 1990, *Fault Rupture Hazard Zones in California*, California Division of Mines and Geology Special Publication 42, 24 p.

r ⁵California Department of Transportation, A Technical Report to Accompany the Caltrans California
r Seismic Hazard Map 1996 (Based on Maximum Credible Earthquakes), by Lalliana Mualchin, July
r 1996.

r ⁶Wakabayashi, John and Smith, David L., "Evaluation of Recurrence Intervals, Characteristic
r Earthquakes, and Slip Rates Associated with Thrusting along the Coast Range-Central Valley
r Geomorphic Boundary, California," Bulletin of the Seismological Society of America, Vol 84, No. 6, pp.
r 1960-1970, December 1994.

r ⁷Wong, I.G., and Biggar, N., 1989, "Seismicity of Eastern Contra Costa County, San Francisco Bay
r Region, CA," Bulletin of the Seismological Society of America, v. 79, no. 4, pp. 1270-1278.

r specific faults and their locations are not well known. Based on structural geology,
r geomorphology, and historical seismicity, the CRCV may comprise 18 to 25 segments
r extending from about the Kettleman Hills and Lost Hills area south of Coalinga to Wilson
r Creek (near Greenwood) in the north.¹ The location of the CRCV is uncertain but it is
r believed to extend through the Brentwood area at the east side of the Coast Ranges.

(2) Onsite Fault Traces. Faults that traverse the site include the Vaqueros, Brentwood, and Davis faults, as well as an unnamed fault that may branch eastward from the Davis fault. Figures 39 and 40 show the approximate locations of these faults. The exact configuration of these faults has been mapped differently by several geologists.² The DWR has completed an extensive field mapping effort of the project area that included exploratory trenches for active faults that could affect the Los Vaqueros Dam site. The configuration of faults shown on Figures 39 and 40 depicts the DWR mapping. Twelve trenches were excavated on the Cowell Ranch project site by DWR to locate and evaluate area faults. These trench locations are shown on Figures 39 and 40.

r In summary, the DWR (1978) concludes the Brentwood Fault is seismically active and that a
r maximum estimated surface displacement of 17 cm (6.7 inches) could occur. They also
r indicate that "smaller amounts of sympathetic movement might occur on other nearby faults"
r (i.e., Davis, Vaqueros, and unnamed parallel faults). Wong and Biggar (1988) suggest that
r the Davis and Vaqueros faults and adjacent unmapped parallel faults are also seismogenic.
r However, these researchers and others (Woodward-Clyde Consultants, 1988 and Harding
r Lawson Associates, 1991 and 1996) have found no evidence of surface displacement of these
r faults in Holocene or late Pleistocene time. The CDMG has not designated these faults as
r "active" AP Zones; thus, there is no mandated requirement by the State that geologic studies
r be performed to evaluate fault rupture potential for development along these faults.
r Nonetheless, these faults should be regarded as having a low potential of producing small
r surface displacements due to triggered slip from large magnitude earthquakes on the CRCV of
r other faults in the vicinity.

¹Wakabayashi and Smith (1994).

²Brabb et al., 1971; California Department of Water Resources (DWR), 1978; Dibblee, 1980 and HLA 1991.

r A more detailed description of the specific characteristics of these onsite faults is presented
r below (moving from west to east):

(a) *Davis Fault*. Numerous trenches were excavated by DWR to define the Davis fault. As previously mapped by the USGS,¹ the Davis fault was shown to split into east and west branches near Briones Valley Road. However, more definitive DWR trenching and mapping show that the Davis fault does not split into two branches as previously thought, but continues southward to Marsh Creek Road where it fades out (see Figure D-2). Also, no evidence was found of a connection between the Davis fault and the Antioch fault to the north. The apparent displacement of the Davis fault near Balfour Road, about 1.5 miles north of the project site, is about 4,500 feet and diminishes to 200 to 300 feet near Marsh Creek Road. The fault zone ranges from 10 to 20 feet in width and adjacent rocks are undisturbed within a short distance of the fault. The fault dips from 67 to 80 degrees to the east. The 1978 DWR
r report suggests that it is a normal fault with the east block of the plate apparently
r downdropped.

One exploratory trench was excavated northwest of the presumed fault branch; no evidence of faulting was discovered.

r By examination of the soil horizons, DWR determined that no offset has occurred within the
r last 50,000 to 100,00 years.

(b) *Unnamed Fault*. Although the east branch of the Davis fault does not exist, a fault that may connect the Davis fault with the Brentwood fault was identified, but with very different orientation than the previously described east branch of the Davis Fault. This fault strikes N45°W and dips northeastward at about 80 degrees (see Figure 39). The fault is mapped for 5,000 feet and is assumed to be a cross fault, even though the connections with the Davis and Brentwood faults are obscured.

¹Brabb, et al., 1971.

- (c) *Brentwood Fault*. The Brentwood fault, as explored by the DWR in 1978, dips to the east at 65 to 83 degrees (see Figure 39). The fault zone ranged from 1.5 to 35 feet wide, where exposed in trenches. Most of the trenches encountered a prominent infilling of rock materials (gouge zone), but in a few of the trenches only intensely fractured and folded shale was found in the fault zone. The DWR determined that the fault is normal and that similar to the Davis fault, the east block is apparently downdropped. Maximum horizontal bedding offsets of approximately 2,500 feet were encountered just south of Marsh Creek Road. This offset diminishes to 700 feet at the Los Vaqueros Dam site approximately six miles southeast of the Cowell Ranch site.
- r By examination of the soil horizons, DWR determined that no offset has occurred in the last 50,000 to 70,000 years--i.e., since the development of the soil. The DWR concluded that the Brentwood fault shows much less activity than the Antioch or Davis faults, based on aerial photograph analyses and field mapping of geomorphic features.

(d) *Vaqueros Fault*. The Vaqueros fault (see Figure 40) was not subject to the same detailed onsite trenching studies by DWR as the Davis and Brentwood faults, because the Vaqueros fault trace does not intersect the dam site that was under investigation by the DWR (1978). However, the known seismic characteristics of the Vaqueros fault (ground shaking potential and earthquake probability) are discussed below.

(3) Historic Seismic Activity in the Region. Numerous small to large earthquakes have occurred in the region in historical times, the most notable being the "great" earthquake of April 18, 1906 on the San Andreas fault (Richter magnitude, 8+). Closer to the project site, strong ground shaking and ground rupture occurred along the Marsh Creek branch of the Greenville fault during the Livermore earthquake of 1980.¹ Fault rupture occurred at two locations on Vasco Road during this earthquake, resulting in a total displacement of about two centimeters.

Historical Richter magnitudes on faults in the project area have been up to 4.0, with the hypocenters of these events (i.e., the depth of the earthquake at its epicenter) deepening to the east. The 1978 DWR report stated that, since 1900, 26 earthquake epicenters of magnitude 1.0 and greater are believed to be associated with three faults passing through the project area (Davis, Vaqueros, and Brentwood).

The Davis fault is believed to be responsible for ten small earthquakes between 1900 and 1973 at depths ranging from 0.1 to 10 miles and event magnitudes ranging from 1.03 to 3.31.

¹California Division of Mines and Geology, "The Livermore Earthquakes of January 1980, Contra Costa and Alameda Counties, California," in California Geology, April 1980.

The Antioch fault is believed responsible for nine earthquakes ranging in magnitude from 2.6 to 4.9, all occurring at a depth of 10 miles.

Seismic activity of the Brentwood fault has been clustered at two locations: one near the Los Vaqueros Dam site approximately six miles southwest of the site and the other approximately 2.5 miles west of the City of Brentwood. Past recorded events have ranged in Richter magnitude from 1.37 to 2.90, and the only well defined depths are from events in the southern area, approximately 3.5 miles below the surface. The northern group of seismic activity has experienced six events.

The Vaqueros fault is also seismically active. Ten small to moderate earthquake epicenters that are believed to be associated with the Vaqueros fault have been mapped at locations evenly distributed up and down the trace. These earthquakes have ranged in magnitude from 1.57 to 4.0. The mean depth of these earthquakes is approximately six miles. The largest of these earthquakes was located approximately 3.5 miles southwest of the site and had a Richter magnitude of 4.0; no depth was determined. The depth of these "Vaqueros" shocks might suggest that they have been incorrectly located and actually occurred on the east dipping Brentwood fault.

(4) Earthquake Probability. The USGS has developed estimates of earthquake probability for selected fault systems based on compiled geologic and seismologic research.¹ The USGS determination of probabilities for future seismic events on these selected faults has been based on the rate of strain accumulation and on earthquake history. The major causative faults have been divided into segments which exhibit similar strain characteristics. The research indicates that the 30-year probability of a large earthquake (i.e., greater than 7.0 on the Richter Scale) in the Bay Area is 67 percent.

The Contra Costa County General Plan also provides estimates of earthquake probability for events on faults affecting the project site. For the maximum probable earthquakes (MPE) listed in Table 35, the General Plan estimates the probability of occurrence as likely (greater than 50 percent probability of occurrence) to intermediate (15 to 50 percent probability of occurrence) over a 50-year period. The probability of a maximum credible earthquake (MCE) is estimated at intermediate to low (less than a 15 percent probability of occurrence). For the characteristic earthquake of magnitude 6.0 on the CRCV (the closest and dominant fault system potentially affecting the project) the probability of occurrence is estimated to be low (based on the range of average return period of 360 to 440 years for the CRCV fault zone estimated by Wakabayashi and Smith, 1994).

(5) Seismic Parameters. To evaluate the potential effects of earthquakes at the project site, the characteristics of the causative fault, the distance to the fault, and the magnitude and

¹United States Geological Survey (USGS), Probability of Large Earthquakes in the San Francisco Bay Region, California, USGS Circular 1053, 1990.

duration of ground shaking must be considered along with site-specific soil conditions. Based
r on the earthquake magnitudes recommended by the General Plan and Wakabayashi and
r Smith¹ and relationships

r ¹(1994)

developed by Idriss¹ regarding fault and ground motion attenuation characteristics, their expected effects at the site were determined by the EIR geotechnical consultant. Table 35 presents the results of this analysis.

On the basis of highest peak bedrock acceleration at the project site, Table 35 indicates that the CRCV fault system located at the east side of the Coast Ranges is the controlling system for the project area. The characteristic earthquake on a segment of this fault zone within the project area would have a magnitude of about 6.0 and could result in severe ground shaking with median peak horizontal bedrock accelerations in the range of about 0.7g. Onsite areas underlain by alluvium would experience somewhat higher ground motions due to amplification of seismic waves. The ground motion at specific building sites in the project area will be dependent on the characteristics of the seismic source, the direction of rupture, its magnitude and distance from the site, as well as local geologic and topographic conditions.

I. Marsh Creek Reservoir Dam

Marsh Creek Dam, located immediately offsite at the northern end of the Marsh Creek Reservoir, was constructed in 1962 for flood control and water storage purposes. The dam is a compacted earthfill impoundment with a maximum height of 60 feet and a length of 1,540 feet. The dam has a level conduit spillway that releases flood water and maintains the desired water level in reservoir. The dam also has a concrete lined, emergency spillway eleven feet below the dam crest. Below the toe of the dam the spillway ends and released flood water crosses an earth terrace to enter Marsh Creek. The bank of Marsh Creek towards the spillway is currently experiencing noticeable erosion.

The dam was designed in 1961 for a 0.1g earthquake ground acceleration, providing a Factor of Safety of 1.17.² Subsequent stability analyses were performed in 1981 by the DWR, using ground accelerations from the maximum credible earthquake, a 6.5 Richter magnitude event occurring on the Antioch fault 10 kilometers from the dam site. The peak base acceleration used for analyses was 0.4g. The 1981 stability analyses indicate that approximately three feet of slumping of the dam embankment would probably occur during the maximum credible earthquake. The DWR concludes that such slumping would not endanger the flood control dam because of the large freeboard (11.7 feet). Based on the 1981 inspection, review and analyses, the DWR determined that Marsh Creek Dam was considered safe for continued operation at that time.

¹Idriss, I. M., Selection of Earthquake Ground Motions at Rock Sites, Report prepared for the Structures Division, Building and Fire Research Laboratory, National Institute of Standards and Technology, Department of Civil Engineering, UC Davis, September 1991.

²A Factor of Safety is a measurement of relative slope stability. A Factor of Safety below 1.0 indicates potential dam failure.

Table 35

SUMMARY OF SEISMIC PARAMETERS FOR FAULTS AFFECTING THE PROJECT SITE

Earthquake Fault Zone	Fault Distance ¹ (miles)	Maximum Probable Earthquake (MPE) ² Magnitude	Estimated Median Peak Bedrock Acceleration at Site due to MPE (g)	Maximum Credible Earthquake (MCE) ³ Magnitude	Estimated Median Peak Bedrock Acceleration at Site due to MCE (g)
Coast Range-Central Valley (CRCV) Fault System	0.1	--	--	6.0 ⁴	0.7 ⁵
Antioch	5	5.75	0.22	6.5	0.33
Clayton/Greenville	5	5.75	0.24	6.5	0.36
Calaveras	15	6.5	0.14	7.25	0.21
Concord	16	5.75	0.08	6.5	0.13
Hayward	24	6.5	0.08	7.25	0.13
San Andreas	42	8.25	0.14	8.5	0.16

SOURCE: Miller/Pacific Engineering Group, 1996.

¹ Measured from center of site to closest portion of fault zone. The location of the CRCV is uncertain.

^{2,3} Faults affecting site, maximum probable and maximum credible earthquakes per the Contra Costa County General Plan (Contra Costa County, January 1991).

⁴ "Characteristics" earthquake magnitude per Wakabayashi and Smith (1994) for Segment 7 range front near Byron and Brentwood.

⁵ Caltrans (1996) recommends a maximum peak acceleration of 0.7g due to uncertainties in the near field region and the engineering significance of high peak accelerations.

Although granular deposits were encountered in some of the borings for the dam, the potential for liquefaction has not been addressed.

r 2. RELEVANT ENVIRONMENTAL POLICIES AND GUIDELINES

Contra Costa County and City of Brentwood goals and policies that pertain to soils and geologic conditions are summarized below.

a. Contra Costa County General Plan Policies

r The Contra Costa County General Plan *Conservation Element* and *Safety Element* contain goals, policies, maps, and implementation measures pertaining to soils and geologic conditions, including seismic hazards, ground failure, slope stability and landslides. Pertinent goals and policies are presented below. Adopted policies pertaining to the Domingue Sandstone deposits are presented in EIR section IV.H, Mineral Resources.

- *Development on hillsides shall be limited to maintain valuable natural vegetation, especially forests and open grasslands, and to control erosion. Development on open hillsides and significant ridgelines throughout the County shall be restricted, and hillsides with a grade of 26 percent or greater shall be protected through implementing zoning measures and other appropriate actions. (Conservation Element, Policy 8-14, page 8-29.)*
- *Erosion control procedures shall be established and enforced for all private and public construction and grading projects. (Conservation Element, Policy 8-63, page 8-61.)*
- *The existing County slope map shall be used to identify areas in the County where slope poses severe constraints for particular land uses. (Conservation Element, Policy 8-66, page 8-61.)*
- *To protect human life and reduce the potential for serious injuries from earthquakes; and to reduce the risks of property losses from seismic disturbances which could have severe economic and social consequences for the County as a whole. (Safety Element, Goal 10-A, page 10-32.)*
- *To reduce to a practical minimum injuries and health risks resulting from the effects of earthquake ground shaking on structures, facilities and utilities. (Safety Element, Goal 10-B, page 10-32.)*
- *To reduce to a practical minimum the potential for life loss, injury, and economic loss due to liquefaction-induced ground failure, levee failure, large lateral land movements toward bodies of water, and consequent flooding; and to mitigate the lesser consequences of liquefaction. (Safety Element, Goal 10-D, page 10-32.)*

b. Project General Geologic/Geotechnical Impacts

Specific areas of concern associated with the relationship between identified onsite geotechnical conditions and the proposed project development layout and conceptual grading approach have been identified by the EIR geotechnical consultant, including geologic features or components of the proposed grading plan that could result in a potentially significant impact on project areas proposed for development or open space. Specific areas of concern have been categorized by the type of concern (i.e., cut slope steeper than 3-to-1, development area underlain by impoundment, etc.) and are annotated by the letters "A" through "K" on Figures 44 and 45.

Impact SG-1: General Geologic/Geotechnical Impacts. The overall combination of potential cut and fill slope instabilities, differential settlement, potential for erosion and sedimentation due to proposed mass grading of onsite hills, expansive and liquefiable soils, landslide deposits, other slope instabilities, soil creep, and seismic hazards on the project site, represents a potential threat to project residents, structures and improvements. This general concern represents a **potentially significant impact** (see Criteria #1 and #2 under "3. Significance Criteria" above).

Each aspect of this combination of impact potentials--cut and fill slope stability, settlement and differential settlement, erosion and sedimentation, expansive soils, liquefiable soils, landslide and other slope instabilities, sand quarry cut slopes, soil creep, seismic hazards and related ground failure potential, and fault ground ruptures potentials--is individually described in subsequent subsections for *Impacts SG-2 through SG-13*.

Mitigation SG-1: Require subsequent geologic/geotechnical investigations, establish grading limitations, require grading progress and completion, reporting, and establish a Geologic Hazards Abatement District. Together with the individual mitigations recommended in subsequent subsections for *Impacts SG-2 through SG-13*, these measures would reduce this general, overall impact to a **less-than-significant level**.

(a) *Subsequent Geologic/Geotechnical Investigations.* Require future applicants to submit for County review subsequent geologic/geotechnical investigations of each future individual project component, including warranted detailed site-specific mitigations.

The 1991 *Preliminary Geologic and Geotechnical Analysis* prepared for the applicant by HLA, and other available information, are adequate to identify general project geotechnical and geologic impacts and mitigation needs at the level of detail appropriate for this "Master EIR"-level assessment. (Several of the mitigations recommended herein for *Impacts SG-2 through SG-13* modify, add to and refer to recommendations in the 1991 *Preliminary Geologic and Geotechnical Analysis* prepared for the applicant by HLA.) However, following common County practice, more detailed geotechnical and geologic investigations that include adequate

Mitigation SG-10: Require evaluation of soil creep in detailed subsequent geotechnical investigations and formulate and implement mitigating design criteria. Implementation of this measure would reduce the impact to a ***less-than-significant level***.

Require a determination by the project geotechnical engineer of the extent and depth of soil creep zones. Require an evaluation of the effect of soil creep on proposed structures and other improvements, as well as natural slopes and creek banks. Require the following:

- Use of adequate lateral pressures in the design of foundations and retaining walls;
- Design of drainage improvements to convey runoff away from susceptible areas;
- Development of maintenance criteria for pavements, slabs and utilities;
- Setbacks from slopes and creek banks subject to soil creep; and
- Slope stability analyses, detailed slope stabilization plans, and inspection during construction (as described above for *Mitigation SG-8*) for roadways adjacent to creeks or within creek structure setback areas.

f. Seismic Hazards

Impact SG-11: Ground Shaking. The project site is likely to experience strong seismic ground shaking in the future, which could damage project structures and infrastructure. This possibility represents a ***potentially significant impact*** (see Criterion #2 under "3. Significance Criteria" above).

As previously described in under "1. Setting" above, and according to the Contra Costa County General Plan, it is "likely" that the project site will experience strong ground shaking within the next 50 years due to earthquakes on nearby faults within the region. The site could experience peak bedrock accelerations in the order of 0.7g due to a large earthquake on the CRCV fault zone,¹ however, this event has a comparatively low probability of occurrence within the next 50 years. Amplification of the bedrock motions could occur at ridge crests where the topography focuses the shaking energy, and in deep soil deposits where soil response amplifies ground motions.

¹Caltrans (1996), A Technical Report to Accompany the California Seismic Hazard Map 1996 (Based on Maximum Credible Earthquakes) by Lalliana Muachin, July 1996.

Mitigation SG-11: Require adherence to Uniform Building Code seismic standards and Structural Engineers Association of California (SEAOC), Seismology Committee, Recommended Lateral Force Requirements and Commentary, 1996, Sixth Edition, guidelines and implementation of mitigating design criteria. Implementation of this measure would reduce seismic related risks to levels ordinarily acceptable to projects of this type in this region and reduce the impact to a ***less-than-significant level***.

Require that the project improvements be designed in accordance with the most recent standards set forth in the seismic section of the Uniform Building Code (UBC), as well as local earthquake-resistant design requirements. Important infrastructure, essential and "safety critical" facilities should be designed using "performance-based" seismic design guidelines published by SEAOC (1996). As part of a detailed geotechnical investigation, require that the project geotechnical professional recommend foundation types and design criteria that take into account earthquake loading, geologic conditions in the area (see *Impact SG-12* below), and site soil response to ground shaking.

Impact SG-12: Ground Failure. Ground failure caused by seismic ground shaking could damage project structures and infrastructure. This possibility represents a ***potentially significant impact*** (see Criterion #2 under "3. Significance Criteria" above).

Ground shaking associated with an earthquake could cause slope and stream bank failures, reactivate existing landslides, or induce fill settlement or liquefaction. These types of ground failures could cause substantial damage to project structures, roadways and utilities.

Mitigation SG-12: Require evaluation of seismic ground failure hazards in subsequent detailed geotechnical investigations and formulate and implement mitigating design criteria. Implementation of this measure would reduce the impact to a ***less-than-significant level***.

For future onsite development projects, require the project applicant to submit geotechnical investigations that address earthquake-induced ground failure hazards as they relate to grading and development, liquefiable soil, and slope stability. In particular, require that the analyses include an evaluation of fills proposed over alluvial areas that are susceptible to liquefaction, and on any unstable slopes that could affect the proposed development. Require that appropriate grading and design be used to reduce the seismically induced ground failure hazards to buildings and infrastructure. Design cut and fill slopes to maintain stability under seismic conditions. Measures to reduce the potential impacts of seismic ground failure include (1) slope inclinations of 3 to 1 or flatter, justified by stability analyses during design; (2) removal or repair of landslides which have the potential to affect downslope developed

areas; and (3) installation of subsurface drainage. Require recommendations to offset the identified ground shaking hazard, including avoidance or accepted engineering solutions such as retained slopes, stiffened foundations, ground modifications, reinforced earth fills, removal of weak or liquefiable soils, landslide repairs, etc.

Impact SG-13: Fault Ground Rupture. Potential fault ground rupture associated with onsite fault traces could damage project structures and infrastructure, including schools, hospitals, emergency operations centers and other critical structures. This possibility represents a ***potentially significant impact*** (see Criterion #2 under "3. Significance Criteria" above).

- r Two of the onsite fault traces, the Davis fault and the Brentwood fault, may be capable of
r producing small surface displacements due to triggered slip caused by large earthquake on
r the CRCV or other faults in the vicinity. Based on currently available information regarding
slip rates and recurrence intervals of events on these faults, such surface displacement would
have a low probability of occurring during the lifetime of the project. It is unknown at this time
if the Vaqueros fault is capable of producing surface displacements.

The Brentwood fault has been mapped in or adjacent to Planning Area 14 (proposed to contain an elementary school) and Planning Area 18 (proposed to contain a middle school). These and other critical facilities should be located well away from the mapped faults or further evaluation of surface faulting should be conducted by the project geologist. Public service and/or public assembly buildings are proposed at Planning Areas 20, 37, 48, and 57. These planning areas are located well away from mapped faults and no mitigation will be required for facilities in these areas.

Mitigation SG-13: Require evaluation of potential fault rupture in subsequent detailed geotechnical investigations for critical facilities and major infrastructure near mapped faults, and formulation and implementation of warranted mitigations. Implementation of this measure would reduce the impact to a ***less-than-significant level***.

- Require further evaluation of surface faulting by the project geologist where critical facilities or essential services such as schools, fire and police stations, hospitals, public assembly
r buildings, important access road and bridges or major utilities are planned on or near mapped
r faults on the site. Such evaluations should include potential for sympathetic ground rupture
r (i.e., triggered slip) as a result of causative events on other local active faults. While
r exploration of the Davis and Brentwood faults onsite has determined them capable of small
r surface displacements, the potential impacts of the Vaqueros fault are still undetermined. For
r faults of this nature, the geologic studies should focus on the most advantageous locations
r onsite to evaluate fault activity, i.e., where the fault(s) cross Holocene materials, rather than
r on the specific location the critical facility. Require appropriate mitigations such as building
setbacks from the fault if ground rupture is found to be a potential hazard for schools or other
critical facilities.

Mitigation should be considered for major utilities that cross faults where ground rupture is a potential hazard. Such mitigation might include using pipes and connections that can

accommodate some movement, using automatic shut-off valves for pipes in areas where pipe damage is a potential or rerouting and avoidance of faults with potential ground rupture.

g. Marsh Creek Reservoir Dam

Impact SG-14: Marsh Creek Reservoir Dam. The project would place residents, structures, and improvements downstream of the offsite Marsh Creek Reservoir dam. Hillside and areas at higher elevations would not be impacted. Potentially liquefiable soils, seismic instability, and ongoing erosion represent a potential threat to the integrity of the dam, creating a potential safety hazard for the project in the event of earthquake-induced dam failure and flooding. This possibility represents a ***potentially significant impact*** (see Criterion #2 under "3. Significance Criteria" above).

The Marsh Creek Reservoir is located upstream of proposed development adjacent to the North Village subarea. It could not be determined from available information whether the potential for liquefaction of the granular deposits underlying the dam has been evaluated. The seismic evaluation of the dam performed by DWR took seismic stability analyses on a peak base acceleration of 0.4g. Based on recent research of blind thrust faults within the Coast Range-Central Valley Geomorphic Boundary by Caltrans¹ and Wakabayashi and Smith,² the faults traversing the project site could produce strong earthquakes generating median peak bedrock accelerations of 0.7g for the characteristic earthquake. While the simultaneous occurrence of the characteristic earthquake and the maximum flood event has a very low probability of occurring, the impacts in the event of a dam failure resulting in the uncontrolled release of flood waters would be severe. In addition, current erosion of the spillway, if unabated, could continue toward the dam.

Mitigation SG-14: As a joint project of the Contra Costa County Flood Control and Water Conservation District (CCCFCWCD) and the Department of Water Resources (DWR) Division of Dam Safety, reevaluate the stability of Marsh Creek Reservoir using current standards and considering proposed downstream development, and formulate and implement warranted mitigations. Implementation of this measure prior to development of project structures for occupancy and other major improvements downstream of the reservoir dam would reduce the impact to a ***less-than-significant level***.

In consultation with the DWR Division of Dam Safety, the Contra Costa County Flood Control and Water Conservation District (CCCFCWCD) should complete an updated reevaluation of the stability of the existing Marsh Creek Reservoir using current standards and taking into

¹Caltrans (1996).

²Wakabayashi, John and Smith, David L., "Evaluation of Recurrence Intervals, Characteristic Earthquakes, and Slip Rates Associated with Thrusting along the Coast Range-Central Valley Geomorphic Boundary, California," Bulletin of the Seismological Society of America, Vol 84, No. 6, pp. 1960-1970, December 1994.

account the proposed downstream improvements. The study should reconsider the potential for embankment damage and slumping, as last described by the Division of Dam Safety in

The County does have a direct role in the NPDES process. The County requires that Best Management Practices (BMP's) be implemented in the project's storm drainage system design to reduce or eliminate storm water pollution. These BMP's apply during project construction as well as long term infrastructure facilities. The developer must file a copy of the Notice of Intent and must submit and obtain County approval of the permit-required SWPPP prior to issuance of building permits.

I. Groundwater Resources

The City of Brentwood and the East Contra Costa Irrigation District (ECCID) make extensive use of aquifers in the low, flat plains of the project vicinity as a source of both potable and irrigation water. Groundwater is generally available in the low, flat, alluvial plains throughout the Brentwood area. At the higher elevations in and around the project site, however, groundwater is less available and aquifers are discontinuous.

r 2. RELEVANT ENVIRONMENTAL POLICIES AND GUIDELINES

- r Pertinent Contra Costa County and City of Brentwood plans, policies and guidelines related to drainage, flooding and water quality are addressed below.

a. Contra Costa County General Plan Policies

Contra Costa County General Plan policies that relate to drainage, flooding and water quality are as follows:

- *New development should be required to finance its legal share of the full costs of drainage improvements necessary to accommodate projected peak flows due to the project. Reimbursement from subsequent developments which benefit from the added capacity may be provided. (Public Facilities/Services Element, Policy 7-44, page 7-33)*
- *Regional detention basins shall be favored over smaller, onsite detention basins. (Policy 7-46, page 7-33)*
- *Open bypass channels, detention basins and all drainage facility rights-of-way which are provided at different locations in order to supplement existing natural creeks should be developed as an asset to the development, e.g., as a secondary recreation use. (Policy 7-48, page 7-33)*
- *Natural streams and channels which have been structurally modified shall be evaluated for potential use as urban open spaces, linear parks, and trails. Cities and other agencies responsible for recreation shall be encouraged to undertake this evaluation. (Policy 7-49, page 7-33)*
- *Detention basins shall be designed for multiple uses such as parks and playing fields when not used for holding water, if liability and maintenance issues can be satisfactorily resolved. (Policy 7-51, page 7-33)*

having a definable bed and banks, or to an existing adequate storm drainage facility. Storm drainage facilities to be constructed outside of the subdivision shall be designed to adequately convey the storm water runoff from the ultimate development of the drainage basin or watershed lying within and above the subdivision. (Section 914-2.006)

c. Conditions for a 21st Century Community

r Contra Costa County's Conditions for a 21st Century Community contains the following conditions of approval that relate to drainage, flooding and water quality:

- *Require project development to finance the full cost of drainage improvements necessary to accommodate peak flows from the project. (Flood Control section, Policy 1)*
- *Establish a storm drainage system that protects property and ensures public safety while maintaining the natural resource values of the creeks. (Flood Control section, Policy 2)*
- *Mitigate the project storm water runoff so that peak storm water flows, under existing conditions, are not exceeded. (Flood Control section, Policy 3)*
- *Mitigate the project storm water runoff in those areas with downstream flooding by providing downstream drainage improvements commensurate with project impacts. (Flood Control section, Policy 4)*
- *The project proponents shall construct onsite detention basins to Flood Control District standards. The detention basins shall reduce post project peak floodflows to predicted preproject levels. Each phase of development shall be reviewed to ensure compliance with this condition. NOTE: Any detention basins or flood control facilities constructed as part of an adopted Drainage Area Plan shall be subject to the review and approval of the Contra Costa County Flood Control District. (Flood Control section, Condition of Approval 1)*
- *Construct a storm drain infrastructure system throughout the proposed project that safely conveys runoff from individual homes, lots, and streets to the major creeks via a system of culverts, gutters, and swales constructed to jurisdictional standards. (Flood Control section, Condition of Approval 2)*
- *During project construction, or to satisfy the NPDES requirements, the project proponents shall construct, as appropriate, onsite retention or detention facilities or install silt or grease traps in the storm drain system for the proposed project drainage. (Flood Control section, Condition of Approval 3)*
- *The project proponents shall develop a hazardous materials control program for construction activities to reduce potentially significant impacts on water quality caused by a chemical spill. This program should require safe collection and disposal of hazardous materials generated during construction activities and should include an emergency response program to ensure quick and safe cleanup of accidental spills. (Flood Control section, Condition of Approval 4)*

3. SIGNIFICANCE CRITERIA

Based on CEQA Guidelines,¹ the project may be considered in this EIR to have a *significant impact* on drainage, flooding and water quality conditions if it would:

- (1) Cause a substantial change in the amount of water in project area drainages;
- (2) Cause a substantial change in the rate and amount of surface runoff leaving the project site;
- (3) Cause substantial flooding, erosion or siltation;
- (4) Expose people or structures to substantial new or increased flooding (in the case of the proposed project, this could result from filling low-lying areas to raise the elevation of the site);
- (5) Result in the substantial degradation of surface or groundwater quality;
- (6) Substantially interfere with groundwater recharge; or
- r (7) Conflict with applicable environmental plans or policies adopted by agencies with
r jurisdiction over the project.

4. IMPACTS AND MITIGATION MEASURES

This section reviews the storm drainage plan proposed by the project, and describes the project's drainage and water quality impacts and associated mitigation needs. The impact analysis focuses on the potential for the development plan to affect surface runoff rates and volumes, current local flooding characteristics, downstream storm drain facility capacities, and water quality.

a. Proposed Project Drainage Approach

Figure 48 diagrams the primary features of the proposed project storm drainage plan as it relates to the four CCCFCWCD-designated drainage areas which fall within the site (*Drainage Areas 106 through 109*). These drainage areas are based on existing topography and watersheds. Project grading would alter the site topography somewhat and, in turn, alter the drainage area boundaries. Dry Creek would receive runoff from the proposed North Hills subarea. The Marsh Creek Reservoir would receive runoff from the proposed Golf Course Residential subarea, and portions of the East Hills subarea. (Runoff from the East Hills subarea would discharge into the Marsh Creek Reservoir secondary storage area.) Runoff

¹State of California, Governor's Office of Planning and Research, Guidelines for Implementation of the California Environmental Quality Act, 1992, Appendix G, Items f-l and Item q.

r = Indicates revised line; i.e., revision to Draft EIR made in response to public comment.

Mitigation D-1: Require the applicant to design improvements in accordance with CCCFCWCD standards. This shall be confirmed through applicable hydraulic and hydrologic studies. This measure would reduce the impact to a ***less-than-significant level***.

Impact D-2: Marsh Creek. The project will increase the amount of impervious surfaces and hence the volume of runoff from Marsh Creek watershed. Detention basins will be utilized to control peak flow rates. However, due to the increased volume of runoff, detention basins will sustain flows that may result in additional erosion and creek bank instability on and downstream of the project site. The erosion and creek bank instability as a result of onsite detention is considered to be a ***significant impact*** (see Criterion #2 under "3. Significance Criteria" above).

Detention basins may reduce the impact of peak hour floods; however, there may still be potential impacts associated with longer duration of high flows caused by project detention basins. The erosion in a channel over a given time period depends on a range of factors including the type of soil, the type and extent of vegetative cover, the shape of the channel and the velocity of the water moving through the channel. The shape of the channel and the velocity of the water determine the total erosive force applied to the channel. The amount of erosion that results from this force will depend on the make-up of the downstream channel (i.e. type of material) it is applied to and the duration at which the force is applied. The Cowell Ranch detention basins would change both the duration and velocity of the water in downstream channels. Without specific detailed analysis it is not possible to say that as planned the current detention basin would not significantly affect bank instability downstream of the project. There are two techniques for mitigating potential downstream bank instability: (1) adjust the size, storage capacity and/or outflow of the proposed detention basins; or (2) repair and stabilize the banks downstream of the project. The second option would likely require separate environmental review of any proposed bank stabilization projects. Detailed channel erosion analysis can be carried out during the final design phase of the project, at which time the need for adjusting the detention basin specifications or in-place downstream bank stabilization projects may be determined.

the project site's contribution to peak flows, and do not include flow from the Los Vaqueros Reservoir.

The CCCFCWCD is currently continuing to study the improvement needs of the Kellogg Creek drainage area. Construction of the Los Vaqueros Reservoir approximately five miles upstream of the project site will alleviate, although not eliminate, downstream flooding along Kellogg Creek. The 100-year storm flows below the reservoir are expected to be reduced from 4,375 cfs to 1,560 cfs.¹ The CCCFCWCD was unable to correlate its calculated Cowell Ranch project flows with calculated flows coming from Los Vaqueros Reservoir because the reservoir's operational schedule has not been determined. The existing capacity in some reaches of the Kellogg Creek channel downstream of the project site is less than 1,400 cfs. Therefore, even with the proposed onsite detention basins and the new reservoir, peak discharges would still exceed channel capacity and flooding downstream of the project site would remain a problem. The project will decrease the magnitude of peak discharge in Kellogg Creek, however, it will contribute to the volume of runoff the creek carries.

Mitigation D-3: Require the applicant to pay applicable drainage fees for *Drainage Area 109* as determined by the Contra Costa County Flood Control and Water Conservation District to fund the project's fair-share proportionate cost of improvements to the Kellogg Creek channel downstream of the project site. This measure would reduce the impact to a ***less-than-significant level***.

Improvements to the Kellogg Creek channel downstream of the project site would be needed to mitigate the increased volume of storm water created by the project. The applicant has not proposed any such improvements. The project applicant should be required to pay applicable drainage fees for *Drainage Area 109* as determined by the Contra Costa County Flood Control and Water Conservation District. The drainage fees should fund the project's fair-share proportionate participation in the cost of future improvements to the Kellogg Creek channel downstream of the project site. Other future development in these drainage areas should also participate in funding the needed improvements through a similar assessment.

Impacts on Kellogg Creek Side Channel. The project would reduce the volume of runoff into the Kellogg Creek Side Channel detention basin. After construction of the proposed project storm drain system, runoff that currently flows into the side channel would instead flow into the project storm drain system and into the proposed detention basins, decreasing the volume of runoff entering the side channel. A decrease in the volume of runoff flowing into the side channel would increase its available storage capacity so that it would be able to detain runoff from larger storm events. This would be considered a ***beneficial impact*** of the project on drainage and flooding conditions in Kellogg Creek.

¹Los Vaqueros EIR.

access limitations (during flooding episodes, traffic could be rerouted to Vasco Road and Walnut Boulevard, or up Deer Valley Road to Balfour Road).

Mitigation for Flooding Impacts along Upper Marsh Creek Road and along Marsh Creek Road-Camino Diablo. No significant impacts have been identified, and therefore no mitigation is required.

Impact D-4: Marsh Creek Channel Capacity. Portions of the project along Marsh Creek between the Marsh Creek Reservoir and Concord Avenue would remain subject to flooding. This is a *significant impact* (see Criterion #4 under "3. Significance Criteria" above).

The reach of Marsh Creek between the Marsh Creek Reservoir and Concord Avenue has an estimated average channel capacity of 650 cfs.¹ The post-project estimated maximum 100-year peak flood discharge from the reservoir is approximately 1,319 cfs, which substantially exceeds the capacity of the channel, currently resulting in flooding along this reach of the creek. Portions of the project along this reach of the creek (Planning Areas 21 and 37, and perhaps 30 and 32) would be subject to these hazardous flooding conditions.

The applicant has proposed to reduce the potential for flooding here by (1) breaching the levee separating the reservoir's primary and secondary storage areas (to make more efficient use of the storage capacity of the reservoir and thereby reduce the 100-year flood discharge from the reservoir to 1,319 cfs), as described above; (2) excavating the Marsh Creek channel from the reservoir to the project site boundary at Concord Avenue, or; (3) elevating proposed structures above the flood levels. However, the applicant has not yet provided the details of (2), i.e., any proposed channel improvements. The EIR hydrologists were therefore unable to evaluate the adequacy of the proposed drainage concept in offsetting the existing flood conditions along this onsite reach of Marsh Creek. Until an independent determination of the adequacy of the proposed improvements can be made, potential flooding along Marsh Creek between the reservoir and Concord Avenue during the 100-year event would be considered a potentially significant impact.

¹DEIR for the Marsh Creek Watershed Regional Drainage Plan, 1990, p. 37.

r **Mitigation D-4:** Require the applicant to submit for Contra Costa County Flood Control
r and Water Conservation District review and approval (1) development standards and
engineering information demonstrating that the proposed below dam development
controls along the creek will eliminate 100-year flooding potentials along this sensitive
reach of Marsh Creek, or (2) plans to increase the Marsh Creek channel capacity
between the Marsh Creek Reservoir and Concord Avenue, an associated maintenance
plan for vegetative thinning, and a commitment to meeting all jurisdictional approval
requirements associated with modifying the creek channel (California Department of Fish
and Game, and U.S. Army Corps of Engineers). Also, require compliance with all
pertinent Contra Costa County regulations concerning runoff and flooding, especially Title
r 9 (Sections 914-2.002 through 914-2.006) of the County Zoning Ordinance. Consistent
r with the Master EIR approach, more information will be required at the time of future
r specific project review to determine if, as expected, the impact has been mitigated to a
r less-than-significant level. Until the impact has been determined to be adequately
r mitigated, the project's effect on Marsh Creek channel capacity would represent a
r ***significant, unavoidable impact.***

The applicant shall submit hydrologic modelling and/or project development standards, with detailed drawings to county staff, which demonstrates to staff satisfaction that the proposed above-dam level breaching measure and development standards for the reservoir-to-Concord Avenue reach of Marsh Creek will eliminate 100-year flood drainage potentials along this sensitive reach of Marsh Creek.

Alternatively, submit channel improvement plans for the proposed enlargement of the channel of Marsh Creek between the Marsh Creek Reservoir and Concord Avenue which are sufficient to contain the 100-year discharge from the reservoir of 1,319 cfs (or provide some other method to remove project structures and improvements from the 100-year flood plain or to raise them above the base flood level with adequate freeboard). All design plans and specifications should conform to CCCFCWCD standards, and should account for greater channel roughness due to channel restoration and bank planting and consequent reduction in flood conveyance capacity in the design of the channel improvements.

Any mitigation approach involving streambed alteration or fill of jurisdictional wetlands shall also include an applicant commitment to meet all associated State Department of Fish and Game and U.S. Army Corps of Engineers approval (remediation requirements).

Dry Creek Reservoir Impacts. The Dry Creek Reservoir is located just outside the project's northern boundary on the north side of Concord Avenue. The storage capacity within the reservoir's primary spillway and emergency spillway elevation is 327.5 acre-feet. The project would increase the volume and rate of runoff into the reservoir. Approximately 400 acres of the North Hills subarea would drain into the reservoir. Runoff calculations completed by the applicant indicate that the reservoir has sufficient surplus capacity to accommodate this increased runoff from the project. These calculations are cumulative, i.e., include both the

Cowell Ranch project and the approved Brentwood Hills Country Club development which, together, represent complete build-out of the Dry Creek watershed above the reservoir. The

r = Indicates revised line; i.e., revision to Draft EIR made in response to public comment.

Impact D-6: Dry Creek Channel Capacity and Erosion Impacts. The project could increase flooding and channel erosion in the reach of Dry Creek above the Dry Creek Reservoir. This possibility represents a **significant impact** (see Criteria #1-3 under "3. Significance Criteria" above).

Runoff from the North Hills subarea would discharge into the reach of Dry Creek above the Dry Creek Reservoir. Flood flows (overspill) along this reach of the creek, which has an unimproved, natural channel, presently spread out into adjoining agricultural and open space land. Project runoff would significantly increase flows in this reach of Dry Creek, adding to existing flooding conditions and increasing the likelihood of streambed and streambank erosion. The channel in this reach of the creek does not have sufficient capacity to accommodate project runoff.

The proposed project includes construction of channel improvements to increase the capacity and maintain the stability of this reach of Dry Creek. Alternatively, the applicant has the option of installing a storm drain pipeline within the existing Briones Valley Road right-of-way. However, the applicant has not yet provided the details of the proposed channel improvements or storm drain alternative. The EIR hydrologists were therefore unable to evaluate the adequacy of the proposed channel improvements in offsetting the increased volume and change in timing of runoff flows. Until an independent determination of the adequacy of the proposed improvements can be made, potential flooding along the reach of Dry Creek above the Dry Creek Reservoir would be considered a potentially significant impact.

Mitigation D-6: Submit for Contra Costa County Flood Control and Water Conservation District review and approval plans for flood control improvements along the reach of Dry Creek above the Dry Creek Reservoir. Also, comply with all pertinent Contra Costa County regulations concerning runoff and flooding, especially Title 9 (Sections 914-2.002 through 914-2.006) of the County Subdivision Ordinance. If the improvements require changes to the channel itself, this will be subject to additional environmental review. Consistent with the Master EIR approach, more information will be required at the time of future specific project review to determine if, as expected, the impact has been mitigated to a less-than-significant level. Until the impact has been determined to be adequately mitigated, the project's effect on Dry Creek Channel capacity and erosion would represent a **significant, unavoidable impact**.

The applicant's future improvement plans should be designed to accommodate project runoff and maintain channel stability along the reach of Dry Creek above the Dry Creek Reservoir. All design plans and specifications should conform to CCCFCWCD performance standards.

- Use a controlled and designated area/facility, consisting of an impermeable pad with controlled and contained drainage, for the proper mixing and loading of pesticides into application equipment.
- Base selection of pesticides on efficacy of treatment and criteria to minimize off-site movement. Select less toxic, less mobile, and less persistent pesticides.
- Carefully time pesticide applications and combine applications with other pest management practices. Accurately identify pests and apply pesticides only when necessary (not as a preventative measure and only when less toxic measures prove infeasible), using the least amount required.
- Avoid pesticide application when soil moisture is high during the rainy season, or prior to any anticipated late or early season storm events, in order to prevent potential impacts from runoff.
- Maintain a buffer area between all surface water impoundments and water courses, and areas of application.
- Limit golf course irrigation to the calculated evapotranspiration rate. Avoid excessive irrigation and soil moisture to reduce potential surface runoff.
- r ▪ Utilize native grasses as much as possible for rough and transition areas of the golf
r course to minimize irrigation and fertilizer needs.
- r ▪ Select turf grasses having high salt/sodium tolerance to reduce the needs for surplus
r irrigation to control mineral build-up in the soil.
- r ▪ Employ Integrated Pest Management practices to minimize the dependence on
r chemicals for pest control

a. Setting

(1) Existing Onsite Conditions. Existing water supply and use on the undeveloped project site are typical of many ranches and agricultural operations within the coastal range of central California. The site currently receives water from three sources: (a) surface water deliveries from the ECCID, (b) onsite wells, and (c) small water impoundments (stock ponds).

The ECCID is the primary source of water currently used on the property. The ranch receives approximately 1,000 acre-feet per year from ECCID for irrigation of the 246-acre apple orchard located in the eastern portion of the site (see EIR section IV.B, Agriculture). The water is delivered via a transmission line from the nearest ECCID canal. The orchard is irrigated by an 18-inch "raw" (untreated) water line within Walnut Boulevard. The intake for the water line is just south of Concord Avenue, on the east side of Walnut Boulevard from ECCID lateral 6S. The water line extends south where it crosses Marsh Creek Road diagonally and continues on the west side of Walnut Boulevard, entering Cowell Ranch at the orchard.





Onsite wells provide water supply for existing onsite uses, including nominal domestic uses, livestock, and a portion of agricultural needs. Several small surface water impoundments collect winter rainfall and runoff, providing an additional supply solely for stock-watering (stock ponds).

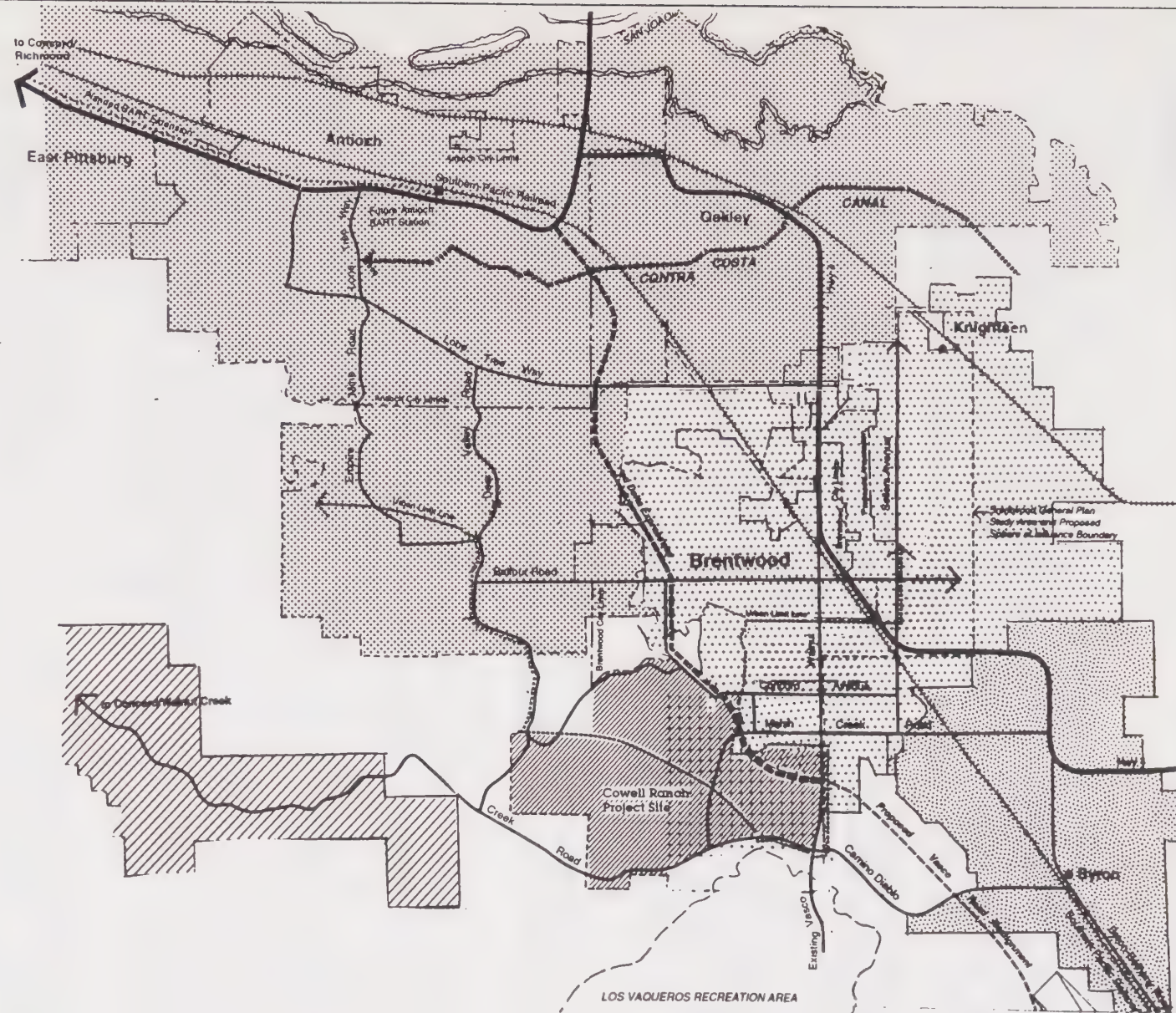
(2) Existing Surface Water Sources. The Brentwood area, historically an agricultural area, is rapidly urbanizing. The area's water purveyors are striving to keep up with the increasing water demand. There are currently four primary water purveyors that supply, treat and/or distribute water to urban (potable) and agricultural (nonpotable) water users in the Brentwood area: the Contra Costa Water District (CCWD), the East Contra Costa Irrigation District (ECCID), the Byron Bethany Irrigation District (BBID), and the City of Brentwood. Any of these four primary water purveyors could potentially supply potable water to future urban development on the project site. The service area boundaries, water rights, and existing and anticipated future water supply, treatment and distribution systems of each of these local water purveyors are briefly described below. Figure 49 shows the current service area boundaries of each of these potential potable water service providers.

(a) Contra Costa Water District (CCWD). The CCWD is the largest water agency in the project vicinity. The district supplies both treated and untreated water to Contra Costa County, including Pittsburg, Antioch, Clayton, and Oakley. The City of Brentwood and the Cowell Ranch project site are not within the current, LAFCO-approved¹ CCWD boundaries for treated water service.

¹LAFCO = the Contra Costa County Local Agency Formation Commission, the interjurisdictional entity charged under state law with establishing the existing and anticipated service boundaries of local public service agencies.

LEGEND

-  EAST CONTRA COSTA IRRIGATION DISTRICT SERVICE AREA
-  BYRON BETHANY IRRIGATION DISTRICT SERVICE AREA
-  CCWD SERVICE AREA - UNTREATED WATER
-  CCWD SERVICE AREA - TREATED WATER



north

SOURCE: Carlson, Barbee & Gibson, Inc.

Cowell Ranch Project EIR
Contra Costa County, CA

Wagstaff and Associates
Urban and Environmental Planners

Figure 49
EXISTING WATER SERVICE AREAS
IN THE PROJECT VICINITY

Most CCWD water comes to the subregion from the federally-controlled Central Valley Project (CVP) via a U.S. Bureau of Reclamation (USBR) water supply contract. The USBR contract with CCWD is for 195,000 acre-feet of water annually,¹ of which approximately 125,000 acre-feet per year are currently diverted from the Sacramento-San Joaquin River Delta (the Delta) at Rock Slough.² Mineral and salt concentrations in Rock Slough water vary widely, depending on runoff conditions and annual rainfall.

r The CCWD water contract with the USBR also contains provisions for the operation of the new Los Vaqueros Reservoir, currently under construction, and for diversion from Old River to supply water to the new reservoir as well as directly to the existing CCWD service area. The Los Vaqueros Reservoir will store water withdrawn from the Delta during high winter flows when water quality is generally better due to dilution of salt and mineral content. By providing the district with the ability to blend these winter Delta flows with summer diversions from Rock Slough, the Los Vaqueros Reservoir is expected to improve the quality of CCWD water. The reservoir is expected to be ready for service by 1998. Water from this reservoir will be used for existing and future water users within the current CCWD service area boundaries.

r The CCWD's contractual water entitlement from the CVP is subject to restrictions when hydrological conditions or limitations on pumping from the Delta affect the system's yield. Use of the district's entitlement from the CVP is greatly affected by regulatory conditions in the Sacramento-San Joaquin Delta, the Central Valley Project Improvement Act of 1992, and upstream conditions of water resources development. The regulatory restrictions of the CCWD-USBR contract indicate that the district will receive not less than 75 percent of its historical usage when the supply of water from the CVP is restricted. The regulatory restrictions of the CCWD-USBR contract indicate that the District will receive not less than 75 percent of its contract entitlement, or 85 percent of historical usage (whichever is greater), except for during water shortages, when the district will receive the lesser of the two. Historical use is defined as the average of CVP supplies unaffected by reductions, plus diversions by Gaylord Container, the City of Antioch and CCWD at Mallard Slough.³

r The CCWD has also recently negotiated an agreement with the East Contra Costa Irrigation District (ECCID) to purchase 21,000 acre-feet of irrigation water per year for domestic, municipal and industrial use within the ECCID service area. The first increment (Block A) consists of 8,000 acre feet per year over a 20-year period from 1990 to

¹One acre-foot = 325,851 gallons.

²*Technical Memorandum No. 2: Water Demands and Available Supplies -- Phase II East County Water Supply Management Study*, prepared for East County Water Management Association (ECWMA), an 11-agency planning group established for the purpose of implementing coordinated long-term water service to east Contra Costa County communities, by CH2M Hill, July 31, 1995.

³CH2M-Hill, ECWMA.

2010.¹ The effect of this agreement is to transfer to CCWD the authority and rights to provide municipal and industrial water supply for the ECCID service area, within which a major portion of the project site and the City of Brentwood are located.

r All of the water provided by CCWD in the project vicinity is treated at the Randall-Bold Water
r Treatment Plant, located in Oakley. The Randall Bold treatment plant has a 40 million-
r gallons-per-day (mgd) capacity. Diablo Water District (DWD) is a joint owner of the Randall-
r Bold treatment plant, with capacity rights to 15 mgd. Currently, the plant produces only about
r four mgd, using only about 10 percent of its capacity. A pipeline that is currently being
constructed as part of the Los Vaqueros Reservoir project will directly connect the reservoir to
r the Randall Bold treatment plant. The plant was designed to allow expansion to 80 mgd,² but
r no plans have been prepared or such an expansion.

(b) *East Contra Costa Irrigation District (ECCID)*. The ECCID currently provides raw
irrigation water to Cowell Ranch, Brentwood, and other nearby agricultural areas within the
r service area shown on Figure 49. ECCID has pre-1914 water rights for diversion of 50,000
acre-feet of water per year from the Delta, which it withdraws from Indian Slough. In winter,
ECCID also uses several groundwater wells that can produce approximately 3,500 to 5,000
acre-feet per year. Between 1975 and 1992, ECCID diverted an average of 34,700 acre-feet
per year from Indian Slough; the maximum annual diversion during this period was 49,200
acre-feet in 1976 and the minimum was 23,900 acre-feet in 1983.³

ECCID currently operates and maintains an extensive distribution system of pipelines and
canals, but does not provide any water treatment. ECCID has a current agreement with
CCWD (discussed previously) to allow the CCWD to supply municipal and industrial water
within ECCID boundaries.

ECCID has water rights that are not subject to restrictions due to hydrological conditions or
limitations on pumping from the Delta. In turn, the portion of its water that may be transferred
to CCWD is also not subject to regulatory restrictions.

(c) *Byron Bethany Irrigation District (BBID)*. BBID has "pre-1914" water rights (i.e., rights
that pre-date the establishment of the current water appropriation system in California and,
thus, are not subject to regulatory restrictions) to divert an unquantified amount of Delta water
for purposes of irrigation and domestic use. BBID's pre-1914 water right for Delta diversions
has never been fully exercised. While its historic use has varied, the District has never used
more than 56,000 acre-feet annually. Recent use has been approximately 40,000 acre-feet

¹CH2M-Hill, ECWMA.

r ²Voigt, Karl, Randall-Bold Water Treatment Plant, personal communication, April 4, 1996.

³CH2M-Hill, ECWMA.

r To provide for its immediate additional water supply needs, on an interim basis the City of
r Brentwood has established an agreement with CCWD for 7,000 acre feet per year of raw
r water from the District.¹ Up to 3,000 acre feet per year of this water is expected to be
treated at CCWD's Randall-Bold Water Treatment Plant in Oakley. The Randall-Bold
r treatment plant has a current 40 mgd capacity, of which only about 10 percent is currently
being used, leaving adequate surplus capacity to supply Brentwood's future needs. However,
there is currently no pipeline connection between the Randall-Bold plant and the City of
Brentwood water system. Approximately five miles of new pipeline and pumps would be
needed to deliver water to Brentwood from the treatment plant.

On a temporary, emergency basis, Brentwood could obtain a limited supply of water from the Randall-Bold plant via the Diablo Water District (DWD) distribution system, which serves the Oakley area. This approach would require construction of a one-mile-long pipeline and the availability of excess distribution capacity in the DWD system.

Proposed Water Supply Sources for Future Growth. In July 1994, the City of Brentwood completed an Infrastructure Master Plan: Water Distribution System, which outlined how the City intends to expand its water service and what facilities will be needed to serve anticipated future growth. Some of the assumptions that were made for the water demand projections are now out of date. A second study, the East County Water Supply Management Study, was completed in 1995. This study examined the overall water supply needs for the east county. Table 38 presents estimates of Brentwood's projected water demand through 2040, using the latest study information and proposed Cowell Ranch water demands.

To reduce the need for potable (treated) water, the City plans to obtain raw water from ECCID for irrigation of golf courses, parks, and open space. Nevertheless, the Master Plan concludes that the City's current water supply will not be sufficient to meet anticipated future demand.

The City has identified short-term, interim, and long-range water supply strategies to meet the potable water demand of anticipated growth. These strategies are described below:²

- *Short-Term Water Supply Plan (1996-1997).* The 1994 Staff Report on the Brentwood Short-Term Water Supply Plan estimated a 1996 average daily demand of 2.5 mgd and called for installation of additional wells. The City is proceeding with these short-term

¹Goto, Mark, Director of Public Works for City of Brentwood, personal communication, May 2, 1996.

²Based on information from the following sources: (1) *Staff Report: Presentation of the Short-Term Water Supply Plan for the City of Brentwood*, prepared by the City's Public Works Department staff, December 13, 1994; (2) *Interim Water Supply Alternatives Study: Final Report*, prepared by John Carollo Engineers, April 1995; (3) *Technical Memorandum No. 2--Phase II East County Water Supply Management Study*, prepared by CH2M Hill, July 31, 1995; and (4) personal communication with the City's Director of Public Works and Water Department staff.

(2) *New Water Treatment Plant at Discovery Bay*--construction of a new treatment plant to treat water withdrawn from Indian Slough; and

(3) *New Water Treatment Plant at Clifton Court Forebay*--construction of a new treatment plant to treat BBID water withdrawn at the Clifton Court Forebay (including the 3,900 acre-feet per year acquired by the Cowell Ranch project from BBID).

A draft Phase II report is expected to be completed by July 1996, followed by ECWMA review and a final Phase II report in August 1996. ECWMA has not yet announced an anticipated date for inauguration of regional long-term water supply service. It is estimated, however, that regional long-term service may not be fully implemented until five to ten years after completion of the Phase II report (i.e., by 2006). A Phase III report was adopted by the governing board members of ECWMA on November 22, 1996. The long-term water supply treatment options in the report require the City of Brentwood to institute one of those options.

The City's July 1994 Infrastructure Master Plan proposed additional booster pump stations, water storage facilities and water transmission mains to connect to and use the water supplied by the Randall-Bold Water Treatment Plant. The treated water supplied by Randall-Bold in the short-term, interim and long-term water supply plans described above would be capable of meeting Brentwood's anticipated maximum day demand of 25,555 gpm or 36.8 mgd at full buildout.

At the present time, the City of Brentwood relies on a series of wells for their domestic water needs. In anticipation of future growth, the City has undertaken the expansion of its wells together with a long-term plan to secure additional raw water. The plan is to purchase 21,000 acre-feet of raw water in three blocks of 7,000 acre-feet each. The long-term strategy is sufficient to supply water through ultimate build-out of the Brentwood General Plan, which assumes 9,814 dwelling units on the properties that are under the ownership of the S. H. Cowell Foundation, and within Spa J. The acreage within the proposed General Plan Amendment would permit 8,554 dwelling units on 4,277 acres.

The Interim Water Supply Study, dated April 1995, has been adopted and provides the mechanism for the first 7,000 acre-feet block (Block A).

The raw water is available from ECCID through options that were purchased by CCWD in 1991. Through negotiation with CCWD and ECCID, the City has acquired the option on the Block A (7,000 acre-feet) ECCID excess water. The City has made two annual option payments and will continue to make these payments through 2009, at which time the transfer of Block A will be complete.

The projected growth assumptions which were used in the development of the City's strategy anticipate buildout of the Cowell Ranch project. The combination of the Block A water, together with the City well system, will provide a capacity of approximately 12,300 acre-feet

r per year and would be adequate to serve Phase I of the Cowell Ranch project. Phase I,
r through the year 2010, includes 1,888 dwelling units, 210,395 square feet of commercial/
r office, 1,158,696 square feet of business park, an elementary school, 2.8 acres of public
r facilities land uses, and a 6 acre neighborhood park.

r Negotiations with CCWD and ECCID are currently underway to secure future Block B and C
r options to provide the City with water resources through ultimate buildout.

r Through an agreement with CCWD, Diablo Water District, and the City, Block A water supply
r will be treated at the Randall Bold Water Treatment Plant and delivered to Brentwood through
r a pipeline interconnection that is currently under construction with a projected completion date
r of July 25, 1997. The agreement to treat at Randall Bold extends through 2003, at which time
r Brentwood can elect to extend the agreement in the event Randall Bold continues to
r experience excess capacity. According to City officials, the alternatives which are available
r include participation in expanding the capacity at Randall Bold Water Treatment Plant or
r construction of a water treatment plant in southeast Brentwood.

r The expansion of Randall Bold or the construction of a new facility will be financed through
r capital improvements fees collected by the City for water treatment and supply. (Brentwood
r Capital Improvements Costs and Basis of Development Fees adopted November 14, 1995.)

r **b. Relevant Environmental Policies and Guidelines**

r Pertinent Contra Costa County and City of Brentwood policies and guidelines pertaining to the
r provision of water service are listed below.

(1) Contra Costa County General Plan Policies. Contra Costa County General Plan policies
that relate to water service are as follows:

- *Development of all urban uses shall be coordinated with provision of essential community services or facilities including, but not limited to, roads, law enforcement and fire protection services, schools, parks, sanitary facilities, water and flood control. (Land Use Element, Goal 3-6, page 3-40)*
- *The location, timing and extent of growth shall be guided through capital improvements programming and financing (i.e., a capital improvement program, assessment districts impact fees, and developer contributions) to prevent infrastructure, facility and service deficiencies. (Land Use Element, Goal 3-7, page 3-40)*
- *Infilling of already developed areas shall be encouraged. Proposals that would prematurely extend development into areas lacking requisite services, facilities and infrastructure shall be opposed. In accommodating new development, preference shall generally be given to vacant or under-used sites within urbanized areas, which have necessary utilities installed with available remaining capacity, before undeveloped suburban lands are utilized. (Land Use Element, Goal 3-8, page 3-40)*

- *Areas not suitable for urban development because of the lack of availability of public facilities shall remain in their present use until the needed infrastructure is or can be assured of being provided. (Land Use Element, Goal 3-9, page 3-41)*
- *New development shall be required to pay its fair share of the cost of all existing public facilities it utilizes, based upon the demand for these facilities which can be attributed to new development. (Public Facilities/Services Element, Policy 7-1, page 7-4)*
- *New development, not existing residents, should be required to pay all costs of upgrading existing public facilities or constructing new facilities which are exclusively needed to serve new development. (Public Facilities/Services Element, Policy 7-2, page 7-5)*
- *The financial impacts of new development or public facilities should generally be determined during the project review process and may be based on the analysis contemplated under the Growth Management Element or otherwise. As part of the project approval, specific findings shall be adopted which relate to the demand for new public facilities and how the demand affects the service standards included in the growth management program. (Public Facilities/Services Element, Policy 7-4, page 7-5)*
- *Expansion [of water service] into new areas within the Urban Limit Line beyond the Spheres should be restricted to those areas where urban development can meet all growth management standards included in this General Plan. (Public Facilities/Services Element, Policy 7-19, page 7-13)*
- *At the project approval stage, the County shall require new development to demonstrate that adequate water quantity and quality can be provided. The County shall determine whether (1) capacity exists within the water system if a development project is built within a set period of time, or (2) capacity will be provided by a funded program or other mechanism. This finding will be based on information furnished or made available to the County from consultations with the appropriate water agency, the applicant, or other sources. (Public Facilities/Services Element, Policy 7-21, page 7-13)*
- *The county shall cooperate with other regulatory agencies to control point and non-point water pollution sources to protect adopted beneficial uses of water. (Public Facilities/Services Element, Policy 7-23, page 7-15)*
- *Land uses and activities that could result in contamination of groundwater supplies shall be identified, monitored and regulated to minimize the risk of such contamination. (Public Facilities/Services Element, Policy 7-25, page 7-15)*

r (2) Conditions for a 21st Century Community. Contra Costa County's Conditions for a 21st Century Community contains the following principles and conditions of approval related to water service:

- *Provide within new communities, infrastructure to a level that, supports an adequate quality of life. (Principle 1)*

(3) Project Impacts. Although the project site is located within unincorporated territory of Contra Costa County and the current application does not request annexation to the City of Brentwood, the applicant anticipates that the project would eventually be annexed by the City. To address the possibility that the project would not be annexed by the City of Brentwood, however, the following analysis considers possible provision of potable water service by the City, as well as by agencies other than the City.

Impact PF-1: Treated Water Supply. A supply of treated water does not currently exist to adequately meet the potable water demand of the project. This represents a **significant impact** (see Criteria #1 and #2 under "c. Significance Criteria" above).

(a) *Effects on Brentwood Water Supply.* The City of Brentwood does not currently have sufficient capacity to serve the potable water needs of the project. The City has reached the 2.3 to 4.6 mgd capacity of its existing water supply system. According to the City's Infrastructure Master Plan, total average daily water demand in the Brentwood Planning Area at buildout (including the Cowell Ranch project) will be 18.4 mgd. The Master Plan identifies short-term, interim, and long-range water supply strategies to meet the potable water demand of anticipated growth.

Total average annual potable water demand for *Water Service Phase 1* of the project in 2010 is estimated at approximately 1,225 acre-feet. Total annual water demand for the City of Brentwood's water service area in 2010 without the Cowell Ranch project has been estimated at 8,200 acre-feet.¹ With *Water Service Phase 1* of the project, total annual water demand for the City in 2010 would be 9,625 acre-feet.

Total average annual potable water demand at full project buildout in 2026 is estimated to be approximately 2,491 acre-feet (2.4 mgd). Total annual water demand for the City of Brentwood's water service area without the Cowell Ranch project has been estimated at 13,300 acre-feet in 2030 and 14,600 acre-feet in 2040.²

(b) *Effects on Delta Water Supply.* Existing agricultural uses on the project site currently receive approximately 1,000 acre-feet of water from the Delta for irrigation. The anticipated project buildout water demand of 3,034 acre-feet would therefore represent a net increase in water demand for the project site of 2,034 acre-feet. This additional project water demand could be met within the existing overall water rights and entitlements of the water purveyors in the project vicinity.

¹Phase II East County Water Supply Management Study.

²Phase II East County Water Supply Management Study.

Water service could be provided to the project by either BBID or the City of Brentwood. Cowell Ranch has an irrevocable agreement with BBID for the supply of up to 3,900 acre-feet of water per year to the Cowell Ranch property. The BBID's existing rights to water from the Delta and existing surpluses within its system are sufficient to meet the project water demand. Brentwood does not have sufficient groundwater supplies to serve the project and does not have its own rights to water from the Delta. However, the City has been purchasing a sufficient water supply from the CCWD, which in turn has been purchasing the water from the ECCID. The ECCID's existing rights to water from the Delta and existing system capacity are sufficient to meet the project water demand; however, system modifications would likely be necessary to convert the use of the water from agricultural to municipal use.

The amount of water withdrawn from the Delta by BBID and ECCID varies considerably from year to year, depending on the irrigation water demands of agricultural users within their service boundaries. For example, BBID withdrawals have varied from 30,000 to 56,000 acre-feet annually. The estimated project water demands of 3,034 acre-feet would be well within the range of historic BBID and ECCID withdrawals from the Delta.

Mitigation PF-1: Implement one of the following mitigation options to secure a reliable treated water supply for the project. Either (a) annex the planned urban development acres of the project to the City of Brentwood and implement a reliable long-term Brentwood water supply solution adequate to serve the project, or (b) the project sponsor shall exercise its water service agreement with the BBID and either (1) provide on-site water treatment or (2) contract with either the City or CCWD for water treatment.

Annexation to the City of Brentwood would also be required under option (b). Consistent with the Master EIR approach, more information will be required to determine if, as expected, the impact has been mitigated to a less-than-significant level. Until an adequate potable water supply is identified, the project's effect on potable water supply would represent a **significant unavoidable impact**.

(a) *City of Brentwood Water Supply.* As discussed in the "Setting," subsection above, under the City's interim water supply strategy, the 7,000 acre-feet per year of untreated water that Brentwood has acquired from CCWD (the first block of the 21,000 acre feet that CCWD acquired from ECCID) would be treated at CCWD's Randall Bold Water Treatment Plant. The treated water would be delivered to Brentwood's water distribution system through the DWD distribution system. A one-mile-long pipeline would be constructed to connect the Brentwood and DWD distribution systems. The City would also construct a reservoir and booster pump station (to provide adequate pressure for the City's system) at the northern city limits. The City plans to have the connections and improvements in place by the summer of 1997. The Interim Water Supply Plan is expected to provide 6,700 acre-feet per year of treated water. The interim water supply strategy, together with the City's short-term water supply strategy (additional wells for a total supply from City wells of 5.0 mgd), would provide a capacity of approximately 12,320 acre-feet per year (11.0 mgd) and would be adequate to serve Phase 1 of the Cowell Ranch project.

There are three long-term water supply options under consideration by the City: (1) a direct City connection to either the Randall-Bold Water Treatment Plant or a proposed treatment plant near Randall-Bold; (2) a new water treatment plant at Discovery Bay to treat water withdrawn from Indian Slough; or (3) a new water treatment plant to treat BBID water

withdrawn at the Clifton Court Forebay. The long-term water supply provided by either of these alternatives would be adequate to serve full buildout of the Cowell Ranch project.

Use of this water would require a change in the ECCID Sphere of Influence boundary, followed by annexation to the District service area boundary. The Sphere of Influence boundary change and subsequent annexations would require approval by DWR and by the Contra Costa County Local Agency Formation Commission (LAFCO), the interjurisdictional commission that considers all proposals for formation of, or annexation to, special districts.

(b) BBID Water Supply. Alternatively, in the event that the Cowell Ranch project is not annexed to the City of Brentwood, the project applicant shall exercise its water service agreement with the BBID for 3,900 acre-feet of raw water per year. A pipeline would need to be constructed, most likely from the project site to BBID intakes south of Discovery Bay, to deliver BBID water to the project site.

Use of this water would require a change in the BBID Sphere of Influence boundary to incorporate all areas of the project site ultimately to be served, followed by incremental annexations of specific portions of the area to the District service area boundary as future individual development components of the project are processed. The Sphere of Influence boundary change and subsequent annexations would require approval by LAFCO.

The raw water supplied by BBID would have to be treated for project domestic water needs. BBID does not provide water treatment. The Cowell Ranch project would either need to (1) construct and operate an on-site water treatment plant or (2) contract with the City of Brentwood or the CCWD to treat its raw water supply.

Impact PF-2: Raw Water Supply. The project would require a total of 547 acre-feet of raw (untreated) water for irrigation of the proposed golf course, parks and landscaping. A raw water supply does not currently exist to meet the irrigation water demand of the project. This represents a ***significant impact*** (see Criteria #1 and #2 under "c. Significance Criteria" above).

Mitigation PF-2: Implement one of the following mitigation options to provide a reliable raw water supply for project irrigation needs: (a) annex the project site to the ECCID for provision of the needed water or (b) exercise the project sponsor's water service agreement with the BBID. Additionally, the applicant shall cooperate with the City of Brentwood for the development of reclaimed water supplies, and, to the extent practicable, shall use such reclaimed water to meet non-potable irrigation demand of the project. The project shall also be required to install dual water pipelines to areas that could potentially be provided reclaimed water for non-potable uses. Consistent with the Master EIR approach, more information will be required to determine if, as expected, the impact has been mitigated to a less-than-significant level. Until adequate conveyance and distribution facilities are in place, the project's effect on the adequacy of raw water supply would represent a **significant unavoidable impact**.

(a) *ECCID Water Supply.* ECCID shall annex that portion of the project site that is not already within the ECCID service boundary and provide the raw water supply needed for project irrigation needs. Use of this water would require a change in the ECCID Sphere of Influence boundary followed by annexation to the District service area boundary. The Sphere of Influence boundary change and subsequent annexations would require approval by LAFCO. Extension of the DWR service area would require DWR approval.

(b) *BBID Water Supply.* Alternatively, the project applicant shall exercise its water service agreement with the BBID for 3,900 acre-feet of raw water per year. Use of this water would require a change in the BBID Sphere of Influence boundary to incorporate all areas of the project site ultimately to be served, followed by incremental annexations of specific portions of the area to the District service area boundary as future individual development components of the project are processed. The Sphere of Influence boundary change and subsequent annexations would require approval by DWR and LAFCO. A pipeline would need to be constructed to deliver water from the BBID to the project site.

Impact PF-3: Conveyance and Distribution Facilities. Needed on- and off-site water system improvements are not in place to serve the project. This represents a **potentially significant impact** (see Criteria #1 and #2 under "c. Significance Criteria" above).

(a) *Onsite Conveyance and Distribution Facilities.* There are no existing water distribution facilities on the project site. Water system improvements would ultimately be needed to provide adequate water service to the project.

The proposed project onsite water distribution system is described in subsection d(2) above and presented in Figure 50. The EIR environmental engineer has reviewed the proposed project water system and has found it to be generally adequate.

(b) *Offsite Conveyance and Distribution Facilities.* Offsite water system improvements would also be needed to serve the project. If the site is annexed to the City of Brentwood,

extension of a 24-inch diameter trunk line from the City of Brentwood water system along Concord Avenue would be needed to supply the Cowell Ranch site. Three other recently-approved subdivisions in Brentwood (i.e., Blackhawk-Nunn, Brentwood Hills Country Club, and Fairway Palms) also depend on extension of the Concord Avenue water line and will extend the line in increments. These extensions will bring the line along Concord Avenue

to the northern boundary of the Cowell Ranch project site and will facilitate project connection to Brentwood's water system.

In the event that the Cowell Ranch project is not annexed to the City of Brentwood and raw water is supplied to the project by the BBID, a pipeline would need to be constructed, most likely from the project site to BBID intakes south of Discovery Bay, to deliver water from the BBID to the project site.

Mitigation PF-3: For each future individual development component of the overall project, require (a) applicant submittal of detailed studies and water system improvement plans; and (b) County approval (or City of Brentwood approval, if the site is annexed to Brentwood) of all designs and constructed improvements. Such water system improvements shall be sized to meet the demands generated solely by the project. Offsite water line extensions shall be located within public roadway rights-of-way. The applicant shall also be required to pay the costs of updating the City of Brentwood Infrastructure Master Plans. Consistent with the Master EIR approach, more information will be required to determine if, as expected, the impact has been mitigated to a less-than-significant level. Until adequate conveyance and distribution facilities are in place, the project's effect on the on- and off-site water system would represent a **significant unavoidable impact**.

If the project site is annexed to the City of Brentwood, additional water system improvements and extensions would be needed to serve each new development on the site. Service to the area would require water system improvements identified in subsection d(2) above. The applicant shall determine the detailed design specifics of the necessary onsite improvements for each future individual development project in coordination with the City of Brentwood. Individual sponsors of future development components of the project shall be required to provide detailed studies and improvement plans to the City Engineer to demonstrate adequate on- and off-site improvements are planned to serve the project. City approval of all individual project water system design specifications and constructed improvements shall be required.

Individual developers shall be required to fund or construct all on- and off-site improvements necessary to serve their project. In addition, a per-unit connection fee sufficient to cover their fair-share of the cost of offsite water conveyance and distribution system improvements shall be required. City development and connection fees shall be allocated to the provision of necessary offsite improvements. These connection fees, as well as ongoing user rates, shall be periodically adjusted as necessary to fund implementation and maintenance of such improvements.

In the event that the Cowell Ranch project is not annexed to the City, Contra Costa County Public Works Department approval of all individual project onsite and offsite wastewater system design specifications and constructed improvements shall be required. In addition,

all such improvements shall be compatible with the City of Brentwood water system to allow for potential future annexation to the City.

Secondary Impacts. The construction of these water system improvements would also result in temporary (construction period) traffic, noise, and air quality impacts. These impacts would be evaluated as part of the future, project-specific environmental review

process that will be required for these subsequent, individual water system improvement projects.

Impact PF-4: Drought Contingency and Water Conservation Planning. The project may be subject to water limitations during drought periods. This represents a *potentially significant impact* (see Criterion #2 under "c. Significance Criteria" above).

Like all water supplies in California, water supply for the project will be subject to limitations during drought periods. While the CCWD's Central Valley Project water allocation can, under the current CCWD-CVP contract regulatory restrictions, be substantially reduced during dry years depending on fishery needs in the Delta, the CCWD water from ECCID that is planned to be used by Brentwood and would serve the Cowell Ranch project is derived from "pre-1914" water rights and would not be subject to such supply limitations during drought periods. Nevertheless, it is possible that project water supplies could be limited during periods of severe drought.

Recent State legislation pertaining to water conservation (AB 325) mandates water use guidelines for landscaping, including limiting the total percentage of turf grass that can be planted to 25 percent of the landscape area and requiring irrigation conservation techniques such as drip irrigation. This new law applies only to new construction, and only if a separate water meter is used for landscaped areas.

Mitigation PF-4: Implement water conservation measures and comply with all applicable provisions of AB 325. These measures would reduce the impact to a *less-than-significant level*.

Implement the following conservation measures to reduce project water consumption and the potential effects of extended drought conditions.

- Equip all new residential units and all other project buildings (commercial, industrial and institutional) with low-flow toilets and shower heads.
- Provide an individual water meter for each new home.
- Provide a separate water meter for landscaped areas in project commercial developments, and comply with the guidelines and regulations set forth by AB 325 for all commercial landscape areas.
- Use drought tolerant and/or native vegetation for common landscape areas and for commercial landscape areas.
- Use drip irrigation to the greatest extent feasible.

conveyed to the ISD for secondary treatment and disposal by pasture irrigation. The differences between this Alternative 2 and Alternative 1 are that the Brentwood treatment plant would not be decommissioned, the pipelines to the ISD would be designed for a flow of 6.8 mgd rather than 10 mgd, and only 6.8 mgd of capacity would be provided for Brentwood in the ISD plant.

Alternative 3: Independent Treatment and Disposal. Under this alternative, Brentwood and the ISD would continue to maintain fully separate treatment facilities. Brentwood would continue to use its current treatment and disposal method for flows of up to 3.2 mgd. To accommodate flows greater than 3.2 mgd, the City would replace the infiltration/disposal ponds with a tertiary wastewater treatment system and direct discharge to Marsh Creek. The addition of new filtration and disinfection facilities would upgrade the plant to meet tertiary standards. Solids would be retained in the existing oxidation ditches until stabilized and then dewatered with belt filter presses. The existing aerobic digesters, drying beds and sludge lagoons would be abandoned.

Alternative 4: Effluent Export to ISD. Under this alternative, Brentwood would continue to provide all primary and secondary wastewater treatment for its service area at its own plant. Secondary-treated effluent would be conveyed from Brentwood to the ISD land-based disposal system on Jersey Island. This alternative would include treatment plant modifications/expansion similar to Alternative 3, except for the tertiary treatment facilities. A new pipeline would be constructed to convey secondary effluent to the ISD.

r Any alternative involving connection to the ISD facility would require annexation or a
r LAFCO-approved contractual arrangement.

(b) *Ironhouse Sanitary District.* The Ironhouse Sanitary District (ISD), a consolidation of the former Oakley and Bethel Island Sanitary Districts, provides consolidated sanitary sewer service to the former service areas of those two districts. The ISD operates and maintains sewage collection facilities and a secondary treatment plant, located at the mouth of Marsh Creek. The treatment plant has a capacity of 2.0 mgd. The treated effluent is currently disposed of by spray irrigation on adjacent pasture land. The District recently purchased an additional 3,500 acres on Jersey Island adjacent to the treatment plant for expanded effluent disposal. This additional land will potentially allow a ten-fold increase in the district's disposal
r capacity to approximately 20 mgd. Expansion of this capacity would also require treatment
r plant enlargement, which would require additional engineering and environmental analysis.

r **b. Relevant Environmental Policies and Guidelines**

r Pertinent Contra Costa County and City of Brentwood policies and guidelines pertaining to the provision of sewer service are listed below.

(1) Contra Costa County General Plan Policies. Contra Costa County General Plan policies that relate to sewer service are as follows:

service impacts, project phasing can be simplified into two impact analysis time frames: *Sewer Service Phase 1* and *Sewer Service Phase 2*, as described in Table 45. Table 45 shows estimated project wastewater flow by these two phases. Unit flow factors used in the wastewater flow estimates are consistent with Brentwood Infrastructure Master Plan criteria. Average daily project wastewater flow at project buildout is estimated at about 1.8 million gallons per day (mgd).

(3) Project Sewer Service Impacts. Although the project site is located within unincorporated territory of Contra Costa County and the current application does not request annexation to the City of Brentwood, the applicant anticipates that the project would eventually be annexed to the City. To address the possibility that the project will not be annexed by the City of Brentwood, however, the following analysis also evaluates on-site wastewater treatment and disposal as well as City provision of sewer service.

Impact PF-5: Wastewater Collection System Impacts. Needed on- and off-site sewer collection facilities are not in place to serve the project. This represents a ***significant impact*** (see Criteria #1-3 under "c. Significance Criteria" above).

There are no existing wastewater collection facilities on the project site. Sewer improvements would ultimately be needed both on- and off-site to provide adequate sewer service to the project.

The anticipated project onsite wastewater collection system layout is described in subsection d(1) above and diagrammed on Figure 52. The EIR environmental engineer has found the project wastewater collection system to be generally adequate as proposed and has identified no constraints to installing the needed infrastructure. The proposed system includes three pump stations (to serve Planning Areas 1-3, 31, 32, and 61) and approximately 9,500 feet of force mains; the remainder of the proposed collection system would consist of gravity sewers.

Potential pump station impacts include substantial increases in maintenance work and equipment replacement, greater risk of raw sewage overflows, increased potential for generation of sewage odors, greater workplace hazards due to electrical and mechanical systems, and sewage odors. However, these potential impacts are routinely addressed through common design and operational measures. Thus, although a gravity sewer system would normally be preferred, the pumping requirements of the proposed project wastewater system would be considered less-than-significant.

With respect to the capacity of the existing offsite Brentwood sewer system, the Brentwood Infrastructure Master Plan recommends extension of interceptor sewer lines along Briones Valley Road and Marsh Creek to provide the capacity needed to connect the Cowell Ranch project and other recently approved subdivisions in the project vicinity to the City's system.

The Brentwood sewer system has recently been improved in the area bordering the project site, which would facilitate project connection to the system.

Mitigation PF-5: For each future individual development component of the overall project, require (a) applicant submittal of detailed studies and sewer system improvement plans; (b) County approval (or City of Brentwood approval, if the site is annexed to Brentwood) of all designs and constructed improvements; and (c) developer construction or fair-share funding of all project-related on- and off-site sewer improvement needs. Such sewer improvement needs shall be sized to meet the demands generated solely by the project. Offsite sewer extensions shall be located within public roadway right-of-way. The applicant shall also be required to (a) pay the costs of updating the City of Brentwood Infrastructure Master Plans, and (b) compensate the Garin Ranch developer for the oversizing of sewer facilities that was required by the City of Brentwood to accommodate the Cowell Ranch project. Consistent with the Master EIR approach, more information will be required to determine if, as expected, the impact has been mitigated to a less-than-significant level. Until an adequate wastewater collection system is identified, the project's effect on wastewater collection would represent a **significant unavoidable impact**.

If the project site is annexed to the City of Brentwood, additional wastewater facility improvements and extensions would be needed to serve each new development on the site. Service to the area would require wastewater system improvements identified in subsection d(2) above. The applicant shall determine the detailed design specifics of the necessary on-site improvements for each future individual development project in coordination with the City of Brentwood. Individual sponsors of future development components of the project shall be required to provide detailed studies and improvement plans to the City Engineer to demonstrate that adequate on- and off-site sewer improvements are planned to serve the project. City approval of all individual project water system design specifications and constructed improvements shall be required. Individual developers shall be required to fund or construct all on- and off-site improvements necessary to serve their project. In addition, a per-unit connection fee sufficient to cover their fair-share of the cost of citywide water treatment plant expansions shall be required. City development and connection fees shall be allocated to the provision of necessary offsite wastewater treatment improvements. These connection fees, as well as ongoing user rates, shall be periodically adjusted as necessary to fund implementation and maintenance of such improvements.

In the event that the Cowell Ranch project is not annexed by the City, a service agreement shall be obtained from the City of Brentwood for sewer service. Contra Costa County Public Works Department approval of all individual project onsite wastewater system design specifications and constructed improvements shall be required. In addition, all such improvements shall be compatible with the City of Brentwood sewer system to allow for potential future annexation by the City.

Secondary Impacts. The construction of these sewer improvements would also result in temporary (construction period) traffic, noise, and air quality impacts. These impacts would be evaluated as part of future, project-specific environmental review process that will be required for these individual water system improvement projects.

Impact PF-6: Wastewater Treatment Capacity Impacts. Sufficient wastewater treatment capacity does not currently exist to serve the project. This represents a **significant impact** (see Criteria #1 and #2 under "c. Significance Criteria" above).

The project would result in an increased wastewater treatment demand. The City of Brentwood wastewater treatment plant cannot currently accept the wastewater that would be generated by the project. The Brentwood treatment plant and wastewater disposal facilities are nearly at capacity. Expanded or alternative treatment facilities are needed to accommodate already approved and planned growth in the City, as well as potential future development such as the Cowell Ranch project. The plant currently treats an average flow of about 1.1 mgd. Current upgrading of the plant have increased its capacity to 1.8 mgd. The City also has interim plant expansion plans that would increase its capacity to 3.2 mgd, and is currently considering long-term wastewater treatment and disposal alternatives that would be adequate to serve the anticipated average daily sewage flow of approximately 10 mgd for Brentwood in the year 2022, including flows from the Cowell Ranch project.

Average daily sewage flow for *Wastewater Treatment Phase 1* of the project in 2010 is estimated at approximately 0.8 mgd. At full project buildout in 2026, the project is expected to generate wastewater flows of approximately 1.8 mgd, average dry weather flow. Average daily sewage flow for Brentwood in the year 2022, including flow from full buildout of the Cowell Ranch project, is estimated at approximately 10 mgd.

Mitigation PF-6: Adhere to County policies regarding the project timing and phasing to correspond to the availability of needed infrastructure capacity. Also, implement one of the following additional mitigation options to provide adequate wastewater treatment for the project: (a) annex the project to the City of Brentwood and implement a long-term wastewater treatment solution adequate to serve the project, or (b) the project sponsor shall provide on-site treatment and disposal, with approvals as required from the Regional Water Quality Control Board. If an onsite facility is constructed, it shall be designed and operated to supply reclaimed water within the Cowell Ranch project. If the project is not served by an onsite facility, the applicant shall be assessed sewerage fees sufficient to support the project's fair share contribution to the development and operation of a wastewater treatment facility that produces reclaimed water for irrigation uses in the general project area. Consistent with the Master EIR approach, more information will be required to determine if, as expected, the impact has been mitigated to a less-than-significant level. Until adequate wastewater treatment is identified, the project's effect on wastewater treatment would represent a **significant unavoidable impact**.

The project phasing recommended by *Mitigation PF-6* would comply with Contra Costa County General Plan policies.

- r (See General Plan Land Use Element Goals 3-6 through 3-9, and Cowell Ranch Guideline 4.a.)

The City of Brentwood is currently reviewing an interim solution involving expansion of the existing treatment plant capacity to 3.2 mgd by 1998 to serve existing, approved and pending development projects. This interim expansion would not provide sufficient capacity to serve the Cowell Ranch project. The City is also considering four long-term wastewater

plans have been developed, or a location selected, for the new (replacement) police station, however.

Policy 1.3.1 of the Brentwood General Plan states that *"capital facilities and personnel shall be provided sufficient to maintain a five minute response time..."*. Existing Police Department response times within the existing City limits range from an average of approximately 2.5 minutes for high priority calls to 6.5 minutes for low priority calls. Under present conditions, the department estimates that it would take just over four minutes to respond to a high priority call from the project site. If the planned new police station were relocated to Oak Street or another location in downtown Brentwood, the response time to Cowell Ranch could increase slightly due to the additional intersections that a police vehicle would have to cross leaving the downtown area.

r **b. Relevant Policies and Guidelines**

r Pertinent Contra Costa County and City of Brentwood policies and guidelines related to police services are summarized below.

(1) Contra Costa County General Plan Policies. Contra Costa County General Plan policies that relate to police service standards are as follows:

- *A sheriff facility standard of 155 square feet of station area per 1,000 population shall be maintained within the unincorporated area of the county. (Public Facilities Element, Policy 7-57, page 7-37)*
- *A maximum response time goal for priority 1 or 2 calls of five minutes for 90 percent of all emergency responses in central business district, urban, and suburban areas, shall be strived for by the sheriff when making staffing and beat configuration decisions. (Public Facilities Element, Policy 7-59, page 7-37)*
- *In developing areas the Sheriff protection service standard shall be achieved by creation of a County Service Area and special tax and/or creation of a Mello Roos Community Facilities District that generates special tax revenue to support additional increments of Sheriff patrol necessary to meet the adopted service standard. Developers, prior to receiving development approvals, should agree (via a Development Agreement or a landowner election) to participate in such special funding districts. (Public Facilities/ Services Element, Implementation Measure 7-aq, page 7-38)*

(2) Conditions for a 21st Century Community. Contra Costa County's Conditions for a 21st Century Community contains the following principles and policies that relate to police services:

- *Assure a sustained level of police...services. (Principle 2)*

- *Provide a maximum response time goal for priority 1 or 2 calls of five minutes for 90 percent of all emergency responses in central business district, urban and suburban areas, inclusive of dispatch time. (Police section, Policy 1)*
- *The jurisdiction should circulate development and open space management/improvement plans to Police or Sheriff's Department for review and incorporate feasible suggestions before approval. (Police section, Policy 2)*

(3) Principles and Guidelines for Cowell Ranch. The Principles and Guidelines for Cowell Ranch document adopted by the Contra Costa County Board of Supervisors contains the following guideline that relates to provision of police services:

- *Development should be phased to correspond with the availability of necessary public infrastructure and service capacity while maintaining acceptable service levels. (Guideline 4.a)*

(4) City of Brentwood General Plan Policies. Policy 1.3.1 of the Brentwood General Plan Community Facilities Element states that "*capital facilities and personnel shall be provided sufficient to maintain a five minute response time...*" and calls for "*...1.7 to 2.5 officers per 1,000 population.*" Policy 1.4 states that "*police...services shall be provided in a manner which ensures that adequate response times are maintained in emergencies.*" Policy 1.3.5 states that "*the City shall require all new developments to participate in a Capital Improvement Financing Program and shall make the required findings of 17.805 of the Brentwood Zoning Ordinance (Phased Development Plan) so that development projects will not create excess demand for police and fire services.*"

c. Significance Criteria

The project may be considered in this EIR to have a *significant* impact on police services if it would:

- (1) Conflict with environmental plans adopted by agencies with jurisdiction over the project, or policies of the community.¹
- (2) Result in a need for new or altered police services.² The project would be considered in this EIR to "result in a need for new or altered police services" if it would (a) cause Sheriff's Department response times for priority 1 or 2 calls to exceed five minutes for 90 percent of all emergency responses; or (b) prevent the Department from

¹CEQA Guidelines, Appendix G, Item a.

²CEQA Guidelines, Appendix I, Item XI(b).

equipment to serve the project-related population increase in the area. Bicycles may also be needed in order to provide bicycle patrolling in the two villages and along the project trail system.

Mitigation PF-8: As described in *Mitigation PF-7* above, require the applicant to prepare a *Public Services and Facilities Plan* (PSFP) that would specify funding for and phasing of police protection services and facilities adequate to meet adopted city police service standards, for review and approval by the Brentwood Police Department. This measure would reduce the impact to a ***less-than-significant level***.

The City's standard of at least 1.7 sworn officers per 1,000 residents should be met as the project builds out. To fund any project-related, excess ongoing operating costs, the project should form or participate in a CSA or similar type of assessment district or comparable financing program in accordance with Brentwood General Plan Community Facilities Element Policy 1.3.5, which states that *"the City shall require all new developments to participate in a Capital Improvement Financing Program and shall make the required findings of 17.805 of the Brentwood Zoning Ordinance (Phased Development Plan) so that development projects will not create excess demand for police and fire services."*

r In addition, the City and Applicant should evaluate the need for an onsite police substation and other one-time excess capital police costs such as vehicles. To fund any one-time excess police facility costs, the City *"shall ensure that impact fees are collected and shall work with the developers to establish mitigation measures to ensure that adequate facilities will be available,"* in accordance with Policy 1.3.4 of the Brentwood General Plan.

r **Impact PF-9: Emergency Access Impacts.** Unless adequate emergency access is provided in future development layouts, police protection could be compromised within the project, resulting in a ***potentially significant impact*** (see Criterion #3 under "c. Significance Criteria" above).

No specific development plans are available at this stage of the planning process to allow determination of the emergency access adequacy of future individual neighborhood designs within the project, and no related specific guidelines are included in the project applications.

Mitigation PF-9: Provide for emergency access in all specific development plans prepared for Cowell Ranch adequate to meet adopted County or City response time standards (whichever apply). Incorporate County or City standards for emergency access in project plans, and submit the appropriate maps for approval by the County Sheriff's Department, or by the Brentwood Police Department if the project site is to be annexed to the City of Brentwood. Secure any emergency access gates in a fashion that would allow emergency entry with a minimum of time and effort. This measure would reduce the impact to a ***less-than-significant level***.

- r City emergency access standards include the provision of Knox lock boxes and appropriately
r designed curb cuts.
-

Impact PF-10: Cumulative Police Service Demand and Response Time Impacts.

The project would contribute to anticipated cumulative police protection needs which have been identified in the Contra Costa County and Brentwood General Plan EIRs. Unless these substantial cumulative needs are met as they develop, the project would contribute to a ***significant cumulative impact*** (see Criterion #2 under "c. Significance Criteria" above).

Mitigation PF-10: Implementation of *Mitigations PF-7 through PF-9* above would reduce the project's contribution to these identified cumulative police service impacts to a ***less-than-significant level***.

4. FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

a. Setting

- (1) Existing Fire Protection and Emergency Medical Service.¹ The East Diablo Fire Protection District (EDFPD) provides primary fire protection and emergency medical services for a 210 square-mile area of east Contra Costa County (including cities and unincorporated areas) that includes the project site. As of September 1996, EDFPD full-time staffing consisted of one fire chief, two assistant fire chiefs, one battalion chief, four captains, and 11 senior fire

¹All information regarding the East Diablo Fire Protection District has been provided by: Richard Ryan, Fire Inspector, County of Contra Costa, February 2, 1994 written communication and May 20, 1996 personal communication; and Assistant Chief John Clary, East Diablo Fire Protection District, personal communication, March 10, 1994, May 31, 1996 and September 23, 1996; or has been derived from the Final Environmental Impact Report on the City of Brentwood General Plan, July 1993.

fighters. The district also has 39 paid on-call personnel. All firefighters are also qualified as emergency medical technicians (EMTs) with defibrillator¹ training.

The EDFPD is the first responder to all fire and emergency medical service calls within its service area. All fire agencies within Contra Costa County have also signed mutual aid agreements to provide secondary assistance to neighboring agencies. The Contra Costa County Fire District is the closest neighboring agency to the project site, followed by the San Ramon Valley Fire District.

The closest EDFPD fire station to Cowell Ranch is the 3981 Walnut Boulevard station in Brentwood, which houses Engine Company 52. There are current plans to relocate this station closer to the site near the intersection of the new alignment of Concord Avenue and Balfour Road, north of the project site. Engine Company 52 is a paid on-call personnel station. The station is equipped with two fire engines and one power wagon.

The majority of the emergency calls received by the EDFPD are for emergency medical services; these calls represented 77 percent of the total emergency calls received by the district over the five-year period from 1986 to 1991.

(2) Current Response Times. For rural areas, the EDFPD's goal is to respond to 90 percent of the calls within ten minutes. Engine Company 52's Walnut Boulevard station is located approximately 3.6 miles from the intersection of Marsh Creek Road and the proposed SR 4 Bypass alignment. The emergency response time from the station to this intersection is estimated to be approximately eight minutes, which is acceptable for this rural area. Once Engine Company 52 is relocated to the Concord Avenue/Balfour Road location, response time would be reduced, but the station would not be within 1.5 miles of the project site, and would require more than a three-minute running time.

The National Insurance Service Office (ISO) has established a rating system to identify the relative risk of substantial fire losses for various fire protection districts. ISO ratings are insurance classifications that range from one to ten, with one being best and ten the worst. The ISO ratings are one of the factors used in establishing local fire insurance rates. The ratings are based on personnel, facilities, response times, fire flow capacities, and the general character of development in the local area. The Cowell Ranch area currently has a Class Eight ISO rating, due to the lack of adequate water for firefighting, and inadequate response times.

(3) Existing Wildland Fire Protection Service. The California Department of Forestry (CDF) is responsible for wildland fire protection in the undeveloped areas of the EDFPD. The CDF

¹A device used in treating heart-attack victims.

station closest to Cowell Ranch is located on Marsh Creek Road, approximately ten miles to the west of the project site. Cowell Ranch is currently served by this station.

r **b. Relevant Environmental Policies and Guidelines**

- r Pertinent Contra Costa County and City of Brentwood policies and guidelines that address fire protection and emergency medical services are summarized below.

(1) Contra Costa County General Plan Policies. Contra Costa County General Plan policies that relate to fire protection and emergency medical service response time standards are as follows:

- *The county shall strive to reach a maximum running time of three minutes and/or 1.5 miles from the first-due station, and a minimum of three fire fighters to be maintained in all central business district (CBD), urban, and suburban areas. (Public Facilities Element, Policy 7-62, page 7-43)*
- *The county shall strive to achieve a total response time (dispatch plus running and set-up time) of five minutes in CBD, urban, and suburban areas for 90 percent of all emergency responses. (Public Facilities Element, Policy 7-63, page 7-43)*
- *New development shall pay its fair share of costs for new fire protection facilities and services. (Public Facilities Element, Policy 7-64, page 7-43)*
- *Sprinkler systems may be required in new residential structures, where necessary to protect health, safety and welfare. (Public Facilities Element, Policy 7-66, page 7-44)*

(2) Conditions for a 21st Century Community. Contra Costa County's Conditions for a 21st Century Community contains the following principle, policies, and conditions of approval that relate to fire protection and emergency medical services:

- *Assure a sustained level of...fire services. (Principle 2)*
- *Response Time. The total response time for fire and emergency medical calls shall be 4 minutes. The standard shall be met a minimum of 90% of the time. (Fire Protection/Emergency Medical Service section, Policy 1) (NOTE: This standard is advisory only; the Contra Costa County General Plan standard takes precedence.)*
- *Fire Prevention and Suppression Plan for Open Space Land. Assure the preparation and ongoing implementation of a fire prevention and ongoing implementation of a fire prevention and suppression plan to address the ongoing fire hazard exposure of the urban-open space interface which will be created by development of this project as set by the fire district. (Fire Protection/Emergency Medical Service section, Policy 2)*
- *Fire stations shall be located within one and one-half miles of development in urban, suburban and central business district areas, with a total response time of 3 minutes for 90% of all emergency responses. (Fire Protection/Emergency Medical Service section,*

(c) *Provide for Adequately Phased Service.* The PSFP should specify how fire protection and emergency medical services will be phased to meet project needs as determined by the EDFPD. A mechanism should be established to ensure that staffing, equipment, and facility needs would be fulfilled to maintain adopted service standards throughout the various phases of the project.

(2) Site and Building Design Features. The project shall comply with current adopted site and building design performance standards in order to reduce identified fire protection and EMS response time impacts to less than significant levels. To meet current adopted standards, the project would be required to:

- Install automatic fire sprinklers in all new structures that (1) contain 10,000 square feet or more, or (2) are not within 1.5 miles of a fire station, or a total response time of three minutes for 90 percent of all emergency responses. (This requirement is based on County Ordinance.)
- Use non-combustible (Class "A") roofing materials (clay tiles, concrete tiles, fiberglass shingles, and certain metal tiles), as required by state law.
- Place addresses in locations that are plainly visible from the roadway fronting the property, as required by the Uniform Fire and Building Codes. The numbers should clearly contrast with their background, as required by code.
- Incorporate fire buffers and fire breaks into tentative subdivision maps as determined necessary by the EDFPD, and as required by County Ordinance and Public Resources Code section 4290. Submit these plans to the Contra Costa County Community Development Department for review to also ensure that any adverse biological impacts that may result from the incorporation of such fire protection measures are avoided.

Impact PF-12: Emergency Access Impacts. Unless adequate emergency access is provided in future development layouts, fire protection and emergency medical service response could be compromised within the project, resulting in a *potentially significant impact* (see Criterion #3 under "c. Significance Criteria" above).

No specific development plans are available at this stage of the planning process to allow determination of the emergency access adequacy of neighborhood design, and no specific guidelines are included in the project applications.

of extensive restoration. No plan for restoration or other improvements to the park has been prepared.¹

The Mt. Diablo State Park is an approximately 20,000-acre state park surrounding 3,844-foot Mt. Diablo (see Figure 15). This facility contains hiking, picnicking, and camping facilities.

(4) Private Recreation Facilities. Privately operated parks and recreation facilities in the project vicinity include the Old Marsh Creek Springs Park described in Table 48, and several golf courses. Privately-operated golf courses open to the public include Bethel Island Golf Course (Bethel Island), Delta View Golf Course (Pittsburg), Island Club at Bethel Island (Bethel Island), and Lone Tree Golf Course (Antioch). Discovery Bay Country Club (Byron) is a private golf course open to members and their guests only. An 18-hole golf course is also included within the approved Brentwood Hills Country Club (Spanos) project adjacent to the project site (see Figure 16).

r b. Relevant Environmental Policies and Guidelines

Pertinent Contra Costa County and City of Brentwood goals and policies that address parks and recreation services are summarized below.

(1) Contra Costa County General Plan Policies. The Contra Costa County General Plan sets forth a goal for parks of four acres (i.e., 2.5 acres of neighborhood park and 1.5 acres of community park) per 1,000 population², and states that neighborhood parks should be located "in the center of the neighborhood" and should serve a one-half mile radius.³ Other General Plan goals and policies that relate to parks and recreation services are as follows:

- *...Preservation and conservation of open space (and) parks...should be encouraged as it is crucial to preserve the continued availability of unique habitats for wildlife and plants, to protect unique scenery and provide a wide range of recreational opportunities for County residents.* (Land Use Element, Policy 3-12, page 3-41)
- *Multiple recreation use, including trails, observation points, and picnicking spots, where appropriate, shall be encouraged along scenic routes.* (Circulation Element, Policy 5-38, page 5-32)

¹Larry Ferri, State Parks Superintendent, Diablo Section, personal communication, February 9, 1994.

²Contra Costa County General Plan, page 9-25.

³Contra Costa County General Plan, page 9-25.

- *The development plan for Cowell Ranch should include a comprehensive restoration and development program for the John Marsh Home to serve as a living demonstration for the area's rich early history. (Guideline 4.e)*

r (4) City of Brentwood Policies. The City of Brentwood has adopted a standard for parks of five acres (i.e., 3.5 acres of neighborhood park and 1.5 acres of community park) per 1,000 population.¹ The City has also adopted a Master Creek Trails and Revegetation Master Plan to provide a pedestrian, bicycle, and equestrian trail system along creek corridors. Brentwood Park and Recreation Master Plan standards require that (1) "passive" neighborhood parks (i.e., neighborhood parks not containing active play fields and ball courts) be five to seven acres in size, (2) community parks be 15 to 25 acres in size and (3) parks be square to rectangular in shape.²

r (5) East Bay Regional Park District Policies. The East Bay Regional Park District Master Plan contains plans for a *Round Valley to Big Break Trail* (or the "Marsh Creek Trail"), which is proposed to connect the Round Valley Regional Park located southwest of the project site with Big Break at the mouth of Marsh Creek north of Oakley. The trail would follow the Marsh Creek channel through the project site and would include a staging area near the John Marsh Home State Park.

c. Significance Criteria

The project may be considered in this EIR to have a *significant* impact on parks and recreation services if it would:

- (1) Conflict with applicable environmental plans adopted by the agencies with jurisdiction over the project, or policies of the community.³
- (2) Increase the demand for neighborhood or regional parks or other recreational facilities.⁴ The project would be considered to create a significant additional local park demand if it would fail to meet the Contra Costa County General Plan park standard of four acres (i.e., 2.5 acres of neighborhood park and 1.5 acres of community park) per 1,000

¹City of Brentwood General Plan Final Environmental Impact Report, pages 348-349.

²Brentwood Park and Recreation Master Plan, Tables 7 and 9, pages V-6 and V-10.

³CEQA Guidelines, Appendix G, Item a.

⁴CEQA Guidelines, Appendix I, Item XV(a).

Mitigation PF-17: Require the project applicant to coordinate the community park design with the State's restoration and development program for the John Marsh Home State Park site (see EIR section IV.A). As part of this process, require the applicant to dedicate a portion of the proposed adjoining community park to the State, as a means of (1) expanding the State park; (2) providing for more efficient design, construction, and maintenance of both the community park and the State park; and (3) compensating the State for the loss of useable park area that would result from the extension of the project's major thoroughfare through the northern portion of the park site. Alternatively, a portion of the proposed *Open Space* area adjoining the east side of the State park site could be dedicated to the State. These measures would reduce the project's impact on State parks to a *less-than-significant level*.

Please refer also to section IV.A (Land Use) for additional mitigation measures involving the State park site.

6. SCHOOLS

a. Setting

Elementary and middle school students in the vicinity of the project site currently attend schools in the Brentwood Unified School District (BUSD); high school students attend schools in the Liberty Union High School District (LUHSD); and community college students attend the Contra Costa Community College District (CCCCD). The project site is located within the existing service boundaries of each of these three established school districts--i.e., the BUSD, LUHSD, and CCCCCD.¹

(1) Existing and Projected BUSD Enrollment and Capacity. Table 49 presents information regarding existing school enrollment and capacity in the BUSD. The BUSD currently includes three elementary schools and one middle school that operate on a year-round schedule. As of the 1997/1998 school year, there were 1,773 students enrolled in BUSD elementary schools that had a total capacity of 1,840, indicating remaining capacity for approximately 67 additional students. The district's one middle school had 1,348 students enrolled in the 1,650-student capacity school, indicating a remaining capacity for approximately 302 additional students.²

¹Laird Neuhart, Vice President, Land Planning Consultants, consultants to the BUSD, personal communication, March 2, 1994.

²Margaret Rogers, Brentwood Union School District, fax transmittal, february 23, 1998.

Table 49
EXISTING SCHOOL ENROLLMENTS AND CAPACITIES (1994/1995)

<u>Existing Schools</u>	<u>Enrollment</u>	<u>Capacity</u>	<u>Remaining Capacity</u>	<u>Additional Capacity Needed</u>
<i>Brentwood Union School District</i>				
r Elementary Schools (K-4)	1,773	1,840	67	NA
r Middle Schools (5-8)	1,348	1,650	302	NA
<i>Liberty Union High School District</i>				
r High Schools	2,663	3,400	737	*
r SOURCE: Laird Neuhart, Vice President, Land Planning Consultants Incorporated, February 18, 1998; r and Margaret Rogers, Brentwood Union School District, February 23, 1998.				
r * Based on current assumptions regarding district-wide development (including the Cowell Ranch r project), the Liberty Union High School estimates that a third high school site will be needed by 2010 to r 2013 (depending on the number of units built per year).				

The BUSD is in the process of purchasing a site for a new elementary school on McClarren Road in southern Brentwood. The district is also currently building a new middle school, to be named Bill Bristow Middle School, at a site on Minnesota Avenue, north of Dainty Avenue.¹

(2) Existing and Projected LUHSD Enrollment and Capacity. Table 49 also presents information regarding existing enrollment and capacity in the LUHSD. The district operates two high schools, Liberty Union High School and La Paloma High School (a continuation high school), with a current combined maximum capacity of 1,800 students. As of the 1997/1998 school year, a total of 2,663 students were enrolled at the two high schools. Based on current assumptions regarding district-wide development (including the Cowell Ranch project), the Liberty Union High School estimates that a third high school site will be needed by 2010 to 2013 (depending on the number of units built per year).

(3) Existing and Projected CCCCDC Enrollment and Capacity. The CCCCDC operates three community colleges to serve countywide needs, including Los Medanos College in Pittsburg, which is the district campus located closest to the project site. The two other campuses are Diablo Valley College, located in Pleasant Hill and Contra Costa College, located in San Pablo.

District-wide enrollment was 34,136 students in Fall 1995, and is projected to increase to 34,400 in Spring 1996. Of these totals, 7,311 students were enrolled at Los Medanos College in Fall 1995, and 7,423 are expected in Spring 1996.²

As of Fall 1995, capacity/load ratios at Los Medanos College were 90 percent for lecture space and 65 percent for lab space. Both ratios exceed State standards, indicating that the college currently needs additional building space or other means of accommodating additional students.³

The CCCCDC anticipates steady increases in enrollment for the foreseeable future in eastern Contra Costa County, mirroring the projected general population growth patterns in the area. The district is currently studying the possible long-term need for a second community college in the East County area.⁴

¹Neuhart, March 24, 1994.

²Frank Baratta, Director of District Research, Contra Costa Community College District, personal communication, May 21, 1996.

³Tom Beckett, Director of Facilities, Contra Costa Community College District, personal communication, May 21, 1996.

⁴Ibid.

(4) Existing School Impact Fees. As of May 1996, the BUSD and LUHSD were jointly levying development impact fees of \$1.84 per square foot of new residential construction and \$0.30 per square foot of new commercial construction to help finance (a) reconstruction and modernization of existing schools, (b) construction of new permanent schools, and (c) rental of temporary classroom facilities. The BUSD receives 70 percent of this current impact fee revenue and the LUHSD receives the remaining 30 percent.

r **b. Relevant Environmental Policies and Guidelines**

- r Pertinent Contra Costa County and City of Brentwood policies and guidelines that address school services, and State of California site selection standards for school facilities, are summarized below.

(1) Contra Costa County General Plan Policies. Contra Costa County General Plan goals and policies that relate to schools are as follows:

- *Development of all urban uses shall be coordinated with provision of essential community services or facilities including, but not limited to, roads, law enforcement and fire protection services, schools, parks, sanitary facilities, water and flood control. (Land Use Element, Policy 3-6, page 3-40)*
- *The location, timing and extent of growth shall be guided through capital improvements programming and financing (i.e. a capital improvement program, assessment districts, impact fees, and developer contributions) to prevent infrastructure, facility and service deficiencies. (Land Use Element, Policy 3-7, page 3-40)*
- *To assure the provision of adequate primary, secondary, and college facilities in the county. (Public Facilities/Services Element, Goal 7-AO, page 7-69)*
- *To provide new schools in optimal locations to serve planned growth. (Public Facilities/Services Element, Goal 7-AP, page 7-69)*
- *To assure that primary and secondary school facilities are adequate or committed to be adequate, prior to approvals of major applications for residential growth. (Public Facilities/Services Element, Goal 7-AR, page 7-69)*
- *To the extent possible, new residential development General Plan Amendments and Rezoning shall, in the absence of the Planning Agency's satisfaction that there are overriding considerations (e.g., provision of low or moderate cost housing), be required to adequately mitigate impacts on primary and secondary school facilities. (Public Facilities/Services Element, Policy 7-141, pages 7-69 to 7-70)*
- *The development of quality schools shall be supported by coordinating development review with local school districts including such activities as designating school sites, obtaining dedication of school sites, and supporting local fees, special taxes, and bond*

- (2) Result in a need for new or altered school services.¹ Based on goals and policies of the Contra Costa County General Plan, the project would create a need for new or altered primary or secondary school services if existing or reasonably foreseeable future facilities would not be adequate to serve the project (Goal 7-AR, page 7-74), based on State classroom size standards (Policy 7-141, page 7-74).
- (3) Propose a school site that fails to meet applicable State of California site selection standards for school facilities (listed in section b.5 above).
- r (4) Provide new schools that are not conveniently accessible.

d. Impacts and Mitigation Measures

r **Impact PF-18: Project Impacts on the BUSD Capacity.** The two proposed onsite elementary school sites and the one proposed onsite middle school site would ultimately provide adequate capacity to accommodate the estimated approximately 1,157 elementary school students and 504 middle school students generated by the project. However, if school construction is not adequately funded to ensure that sufficient school space is available as project housing units become occupied, the project could have a ***potentially significant impact*** on existing schools (see Criterion #1 under "c. Significance Criteria" above).

The BUSD currently provides elementary and middle school facilities for grades K through 8. As shown on Figure 6 in section III, Project Description, and in Table 46 (on page IV.F--49), the project would include two ten-acre elementary school sites and one 26-acre middle school site. Each elementary school site would be sufficient to provide space for 600 students, and the middle school site would be sufficient to provide space for 900 students, based on BUSD standards that establish a maximum of 600 students per elementary school and 900 students per middle school. Tables 50 and 51 compare this onsite school site capacity with the estimated number of students that would be generated by the project over its estimated 25-year buildout period. As shown in the tables, the project would provide excess K-8 school site capacity. In addition, however, onsite school construction must be adequately funded to ensure that sufficient school space is available as project housing units become occupied. Unless sufficient funding were available to finance adequate school site preparation and facility construction, the elementary and middle school capacity ultimately needed over the project buildout period (25 years) to accommodate the 1,157 elementary and 504 middle school students generated by the project could not be provided.

¹CEQA Guidelines, Appendix I, Item XI(c).

Table 50
COWELL RANCH STUDENT GENERATION

<u>Period</u>	<u>Housing Type</u>	<u>Units</u>	<u>Elementary School (K-5) Students¹</u>	<u>Middle School (6-8) Students²</u>	<u>High School (9-12) Students³</u>
2000- 2010	Single-family	738	258	111	140
r	Single-family in				
r	ML designation ⁴	153	54	23	29
r	Other multi-family	<u>977</u>	<u>176</u>	<u>78</u>	<u>88</u>
r subtotal		1,868	488	212	257
2011- 2025	Single-family	1,012	354	152	192
r	Single-family in				
r	ML designation ⁴	104	36	16	20
r	Other multi-family	1,549	279	124	140
r	Senior	<u>693</u>	<u>0</u>	<u>0</u>	<u>0</u>
r subtotal		3,358	669	292	352
r Buildout Total		5,226	1,157	504	609

SOURCE: Wagstaff and Associates, and Kimberly Wood, Land Planning Consultants, Inc., representing the Brentwood Unified School District and the Liberty Union High School District; personal communication November 8, 1993 and written communication February 12, 1993.

¹ The elementary student yield factors are 0.35 student per single-family unit, 0.18 per multi-family unit, and 0.0 per senior unit.

² The middle school student yield factors are 0.15 student per single-family unit, 0.08 per multi-family unit, and 0.0 per senior unit.

³ The high school student yield factors are 0.19 student per single-family unit, 0.09 per multi-family unit, and 0.0 per senior unit.

r ⁴ Assumes that 20 percent of the units in the Multiple Family Residential Low (ML) designation (i.e., 153
r of the 765 ML units developed during the 2000-2010 (Phase I) period, and 104 of the 521 non-senior-
r citizen ML units developed during the 2011-2025 (Phase II) period) would be single-family units (e.g.,
r small single-family detached houses). The student yield factors for single-family units have been
r applied to the single-family units estimated for the ML housing category.

Table 51

**COMPARISON OF SCHOOL CAPACITY PROVIDED ON COWELL RANCH TO STUDENTS
GENERATED BY COWELL RANCH PROJECT**

<u>Period</u>	<u>School Type</u>	<u>Number of Schools Provided</u>	<u>Student Capacity Provided¹</u>	<u>Students Generated²</u>	<u>Excess Capacity Provided</u>	<u>Additional Capacity Needed</u>
2000-						
r 2010	Elementary School	1	600	488	112	0
r	Middle School	0	0	212	NA	212
r	High School	0	0	257	NA	257
2011-						
r 2025	Elementary School	2	1,200	1,157	43	0
r (total)	Middle School	1	900	504	396	0
r	High School	0	0	609	NA	609

SOURCE: Wagstaff and Associates, 1996.

NA: Not Applicable

¹ Assumes capacities of 600 students per elementary school and 900 per middle school.

² From Table F-12 of this EIR.

Impact PF-19: Phasing of Onsite Residential and School Construction. If phasing of onsite residential and school construction is not coordinated, onsite classroom space may not be available as project housing units become occupied, resulting in a **potentially significant impact** on existing schools (see Criterion #1 under "c. Significance Criteria" above).

r The coordinated phasing of project residential and school facilities development is a concern. For example, Table 50 indicates that by 2010 there would be an estimated 212 middle school students onsite, but as indicated in Table 51 no middle school would be provided onsite by 2010. It is possible that these students could be accommodated at Bill Bristow Middle School located on Minnesota Avenue north of Dainty Avenue (approximately 1.75 miles north of the site). As indicated in Table 51, by 2025 there would be one middle school onsite that would provide space to accommodate all project middle school students. Similarly, while onsite elementary school capacity would be adequate to serve project elementary school students within each major project phase, school construction would need to be timed so that onsite elementary schools are available at the time of housing unit occupancy. Unless it can be demonstrated that adequate school capacity would be available either on- or off-site for each phase of project residential construction, school services would not be adequate to serve the project.

Mitigation PF-19: Include provisions in the County's development agreement with the applicant to require (a) applicant submittal of a *School Phasing Plan* as part of the *school financing and cost distribution plan* (construction and equipment) prior to the recording of each final subdivision map, and (b) County and BUSD sign-off of future tentative subdivision map and building permit approvals. This measure would mitigate the impact to a **less-than-significant level**.

The County may require the following measures to mitigate project school phasing impacts, since the project requires "legislative actions" (i.e., general plan amendment and zone change) and therefore, based on the *Mira/Hart/Murietta* line of court cases, is not subject to the mitigation limitations specified by Government Code section 65996. These measures shall be included as provisions of the County's development agreement with the applicant:

(a) *School Phasing Plan.* The development agreement should require the applicant to prepare a *School Phasing Plan* that provides for coordination of proposed residential development with construction of onsite elementary and middle school facilities. The phasing plan should be part of the *school financing and cost distribution plan* (for construction and equipment) submitted prior to the recording of each final subdivision map, as stipulated in *Mitigation PF-17* above.

(c) *County and BUSD Sign-off.* As recommended in the County's Conditions for a 21st Century Community (Condition 1, page 15), the development agreement should require that

locations of necessary schools be formalized concurrent with future tentative map approvals. Access, configuration, size, useable space and basic infrastructure needs (including timing and delivery of utilities) should also be determined at this time. Prior to issuance of building permits for units in the various phases of the project, the applicant/developer should secure a "will serve" letter from the BUSD guaranteeing that adequate space will be provided in schools on- or off-site.

Impact PF-20: Cumulative Capacity Impacts on the BUSD. The project, combined with other development anticipated in the Brentwood area, would contribute to cumulative needs for additional elementary and middle school capacity in the BUSD. This represents a ***potentially significant impact*** (see Criterion #1 under "c. Significance Criteria" above).

r As shown in Table 51, the project proposes school sites that would ultimately provide excess site capacity for approximately 43 more elementary school students and 396 more middle school students than are expected to be generated by the project. This excess capacity, if realized through actual school construction, could accommodate students from other development in nearby Brentwood, particularly the cumulative development that could occur on the adjacent land to the east at the proposed SR 4 Bypass/Marsh Creek Road intersection. It has been estimated in this EIR for cumulative impact assessment purposes that up to approximately 334 medium-density multi-family housing units (20.9 units per acre) could develop in this area. These units could generate approximately 60 additional elementary school students and 27 middle school students.

Mitigation PF-20: Implementation of *Mitigations PF-18 and PF-19* above would reduce project contributions to cumulative school impacts to a ***less-than-significant level***.

r **Impact PF-21: Project Impacts on the LUHSD Capacity.** The project would generate approximately 609 high school students. This represents a ***potentially significant impact*** (see Criterion #1 under "c. Significance Criteria" above).

r For purposes of this EIR, it is assumed that the 609 high school students generated by the project (see Tables 50 and 51) would attend an offsite school or schools, since the project does not propose an onsite high school. At this time it is not known if project residents
r would attend Liberty Union High School in Brentwood, the new high school in Oakley, or a third high school that is under consideration at an as-yet undetermined location. A potential high school site on the Cowell Ranch property has previously been discussed, and is still under consideration by the school district as one of

six possible sites for the third high school.¹ Supplemental environmental review would be required if this option were to be pursued in the future.

Mitigation PF-21: Provide a high school site at an appropriate location within the project boundary that meets reasonable size, topographic, and locational requirements described by the LUHSD (currently described as 40 acres on relatively flat land) and all applicable site selection standards of the State Board of Education. In addition, implement *Mitigation PF-18* above. These measures would reduce project impacts on LUHSD capacity to a ***less-than-significant level***.

Project Impacts on the CCCCDC Capacity. The project would generate approximately 592 community college students, but this impact would be offset by the provision of a 30-acre onsite community college campus. The project's impact on CCCCDC capacity would therefore be ***less-than-significant*** (see Criterion #1 under "c. Significance Criteria" above).

As shown on Figure 6 in section III, Project Description, and in Table 44, the project would provide a 30-acre community college site. Based on the district's standard assumptions that on average, 60.3 adults per 1,000 population would attend the CCCCDC and 75.1 percent of the population in the county are adults,² the residential component of the project would generate an estimated 591 additional community college students.³ It is possible that additional CCCCDC students could also be generated by the commercial and industrial components of the project; however, there is no reliable method available to quantify the employment-based CCCCDC students generation. Some of the employees of onsite businesses would be Cowell Ranch residents (an estimated 17 percent in 2010 and 29 percent at project buildout), some would be existing County residents, others would relocate to the County, and others would commute from outside of the County (an estimated ten percent by 2010 and 21 percent by 2025).

It is anticipated that the provision of the 30-acre site for a community college campus would adequately compensate for increases in CCCCDC enrollment generated by the project.

Mitigation for Project Impacts on CCCCDC Capacity. No significant impacts have been identified, and therefore, no mitigation measures are required.

¹Neuhart, personal communication, September 23, 1996.

²Frank Baratta, Director of District Research, Contra Costa Community College District, written communication, May 21, 1996.

³The project's population at buildout is estimated at 13,076 people (from Table 6). If 75.1 percent were adults, there would be 9,807 adult residents of the project. At the rate of 60.33 students per 1,000 adult population, the project would generate 591 CCCCDC students ($9.8 \times 60.33 = 591$).

homes. As shown in Table 52, there was an actual need for 510 slots, or 13 percent more than that available.¹

In addition, the actual shortage of child care slots in the Brentwood area is likely to exceed the shortage estimated in Table 52 for two reasons. First, the number of "available slots" shown in the table includes the *maximum* number of slots family day care homes are licensed to provide. Although a home may be licensed for up to six slots, only four slots may be actually offered by the provider. Second, a 15 percent vacancy rate among providers is considered necessary for a healthy child care provisions market. Thus, the actual existing local need for child care slots probably exceeds the 13 percent increment stated above.

r b. Relevant Environmental Policies and Guidelines

- r** Pertinent Contra Costa County and City of Brentwood policies and guidelines that address child care are summarized below.

- r** (1) Contra Costa County General Plan Policies. The *Public Facilities/Services Element* of the Contra Costa County General Plan contains goals and policies to "assist and encourage the development of adequate, affordable, and quality child care in Contra Costa County," including the following policies:

- *The development of high quality childcare and preschool facilities shall be encouraged in appropriate locations, especially in conjunction with schools, church facilities and centers of concentrated employment such as business parks.* (Public Facilities/Services Element, Policy 7-151, page 7-74)
- *Childcare and preschool facilities shall be consistent with residential and commercial land use designations where safe vehicular access and effective buffering of neighboring residences can be achieved.* (Public Facilities/Services Element, Policy 7-152, page 7-74)
- *Proposed development projects shall be required to provide for childcare and preschool facilities in accordance with the General Plan and applicable ordinances, when significant demand for these facilities is created by the projects.* (Public Facilities/Services Element, Policy 7-153, page 7-74)
- *Proposed commercial and residential projects which do not directly provide childcare or preschool facilities shall be required to comply with the provisions of the adopted childcare ordinance.* (Public Facilities/Services Element, Policy 7-154, page 7-74)

¹Janet Traenkner, Child Care Broker, Contra Costa Child Care Council, personal communication, March 2, 1992.

Altamont Landfill and the Potrero Hills Landfill, are also expected to have adequate capacity to accept waste from the new recycling center and transfer station in Pittsburg.¹

(3) Household Hazardous Wastes. Household hazardous wastes are defined in the Countywide Integrated Waste Management Plan as paints, solvents, cleaners, bleaches, pesticides, used motor oil, batteries, chemicals for pool and hobby use, and similar products with toxic properties. Project area residents can dispose of hazardous household wastes at three locations in Contra Costa County:

- The Pleasant Hill Bayshore Disposal Facility in Pacheco, which accepts household hazardous waste from Antioch residents and from non-Antioch residents for a fee.
- The California Advanced Environmental Technology Corporation in Richmond, which accepts household hazardous waste one weekday per month for a fee.
- The El Cerrito Recycling Center, which accepts car batteries and used motor oil.

Of these three existing choices, the Pleasant Hill facility is closest to the project area.

The County also organizes a mobile household hazardous waste collection program in various cities, whereby a City calls to make an appointment for vans to drive to selected locations where residents can drop off their household hazardous wastes. The City of Brentwood conducted a similar event in 1990 where they accepted batteries, oil, and paint, but does not have an ongoing program of such collection events.

(4) Commercial Hazardous Materials and Wastes. Some commercial and industrial operations handle and store hazardous materials, as well as produce and dispose of hazardous wastes. These businesses typically contract with a private licensed hazardous waste hauler to dispose of the wastes. The State of California and the Contra Costa County Health Services Department regulate handling, storage, and disposal of these hazardous materials and wastes.

r **b. Relevant Environmental Policies and Guidelines**

- r Pertinent Contra Costa County and City of Brentwood policies and guidelines that address solid waste services are summarized below.

- r (1) Contra Costa County General Plan Policies. The *Public Facilities/Services Element* of the Contra Costa County General Plan the following policy:

¹Lamphier & Associates, Final Environmental Impact Report, Recycling Center and Transfer Station, State Clearinghouse No. 94063017, Volume I, prepared for the City of Pittsburg, February 1995, page 86.

employees working on maintenance crews countywide as of 1994.¹ The crew's responsibilities include sweeping and cleaning streets, pavement repair, street striping, sign maintenance, and guard rail and shoulder repair.

- r The City of Brentwood standard for street cleaning is to clean all streets once a week and
- r respond to street repair requirements within 24 hours, provide street striping once a year and
- r provide regulatory street sign maintenance within 48 hours.

r **b. Relevant Environmental Policies and Guidelines**

- r Pertinent Contra Costa County and City of Brentwood policies and guidelines that address road maintenance are summarized below.

(1) Contra Costa County General Plan Policies. The Contra Costa County General Plan does not contain policies that specifically address road maintenance.

(2) Principles and Guidelines for Cowell Ranch. The Principles and Guidelines for Cowell Ranch document adopted by the Contra Costa County Board of Supervisors contains the following guidelines that relate to provision of public services, such as road maintenance:

- *Development should be phased to correspond with the availability of necessary public infrastructure and service capacity while maintaining acceptable service levels.*
(Guideline 4.a)

(3) City of Brentwood General Plan Policies. The Brentwood General Plan does not contain policies that specifically address road maintenance.

c. Significance Criteria

The project may be considered in this EIR to have a *significant* impact on solid waste services if it would:

- (1) Conflict with applicable environmental plans adopted by agencies with jurisdiction over the project, or policies of the community.²
- (2) Have an effect upon, or result in a need for new or altered government services for road maintenance.³

¹Greg Connaughton, Head of Maintenance Division, Contra Costa County Department of Public Works, personal communication March 7, 1994.

²CEQA Guidelines, Appendix G, Item a.

³CEQA Guidelines, Appendix I, Item XI(d).

1. SETTING

a. Overview

Cowell Ranch is located in the eastern foothills of Mt. Diablo. Much of the site consists of rolling rangeland dissected by Marsh Creek and its tributaries. The Marsh Creek Reservoir, located near the center of the project site, is owned by the Contra Costa County Flood Control and Water Conservation District and is not a part of the project. Due to the low annual rainfall at the project site, grasslands are the prevailing vegetation, woodlands are limited to three small open stands of blue oaks and the narrow band of riparian trees along Marsh Creek. Higher hills to the west of the site, including Mt. Diablo itself, are more densely vegetated with woodland and chaparral habitats.

To the north and east of the site, the foothills give way to the nearly flat agricultural lands of California's Central Valley. The Brentwood City limits are contiguous with the project site's northern boundary. To the south along Kellogg Creek, the Los Vaqueros Reservoir is under construction on lands owned by the Contra Costa Water District. These hilly lands, which contain grassland, chaparral and blue oak woodland, are to be maintained as open space buffers around the finished reservoir.

b. Biotic Habitats: Flora

Figures 53 and 54 show the locations of biotic habitats identified on the project site; Table 55 lists their acreages and percentage of total site acreage. Of the nine identified habitats, six are natural terrestrial communities described by Holland (1986), Barbour and Major (1977), and Munz (1959).¹ For the purposes of this EIR, these six natural terrestrial communities are identified as: (1) non-native grassland, (2) blue oak woodland, (3) Great Valley mixed riparian woodland, (4) valley sink scrub, (5) seasonal freshwater marsh, and (6) northern claypan vernal pool. In addition to these natural terrestrial communities, the project site contains two "non-natural" terrestrial communities that support a variety of native and non-native plants and animals: "orchard/cropland" and "residential." The ninth identified habitat, "aquatic," occurs in various locations of the project area in the form of stock ponds and seasonal creeks.

(1) Non-native Grassland. Non-native grassland comprises the most extensive biotic habitat of the project site, as indicated in Table 55 and on Figure 53. The grassland is presently used as rangeland for the grazing of cattle. Habitat vegetation is limited to grasses and forbs of European origin, including wild oats (*Avena* sp.), ripgut (*Bromus diandrus*), soft chess (*Bromus hordeaceus*) and farmer's foxtail (*Hordeum murinum* ssp. *leporinum*). Common forbs include broad-leaf filaree (*Erodium botrys*), black mustard (*Brassica nigra*), and yellow

¹All author and date citations refer to the bibliography included in EIR Appendix F, Supplemental Biological Resources Data.

Table 56 cont.

<u>Species</u>	<u>Status¹</u>	<u>Habitat</u>	<u>Occurrence on the Project Site²</u>
Southwestern Pond Turtle (<i>Clemmys marmorata marmorata</i>)	CSC	Open slow-moving water of rivers and creeks of central California with rocks and logs for basking.	Present. Suitable habitat present in Marsh Creek and Marsh Creek Reservoir. Two individuals observed in Marsh Creek by LSA biologists.
Cooper's Hawk (<i>Accipiter cooperii</i>)	CSC	Breeds and hunts in oak woodlands and riparian habitats of the state.	Present. One individual was observed over Marsh Creek in March of 1996. This species is likely to breed in riparian habitat of Marsh Creek.
Sharp-shinned Hawk (<i>Accipiter striatus</i>)	CSC	Breeds in ponderosa pine, black oak, riparian deciduous, and mixed conifer forest, of northern half of state; many habitats are used in winter.	Likely. Sharp-shinned Hawks probably forage within riparian and oak woodlands of site.
Golden Eagle (<i>Aquila chrysaetos</i>)	CSC	Typically frequents rolling foothills, mountain areas, sage-juniper flats and desert.	Likely. Grasslands of the site provide excellent foraging habitats for Golden Eagles.
Ferruginous Hawk (<i>Buteo regalis</i>)	CSC	A wintering population forages over open rangeland of California's Central Valley.	Possible. Could occur on site as winter visitor.
Northern Harrier (<i>Circus cyaneus</i>)	CSC	Frequents meadows, grasslands, open rangelands, freshwater emergency wetlands; uncommon in wooded habitats.	Present. One individual was observed foraging on the site by LSA biologists. Nesting habitat may be present around Marsh Creek Reservoir.
White-tailed Kite (<i>Elanus caeruleus</i>)	CSC	Open grassland and agricultural areas throughout central California.	Present. Foraging and nesting habitat are both present. One individual was observed immediately north of Marsh Creek Reservoir in March of 1996.
Osprey (<i>Pandion haliaetus</i>)	CSC	Occurs along the California coast and inland along rivers and lakes with fish.	Possible. This species could occur as a transient, especially in vicinity of Marsh Creek Reservoir.
Merlin (<i>Falco columbarius</i>)	CSC	This falcon, which breeds in Canada, winters in a variety of California habitats, including grasslands, savannahs, wetlands, etc.	Present. This species is a winter visitor which has been observed on the site.
Prairie Falcon (<i>Falco mexicanus</i>)	CSC	Distributed from annual grasslands to alpine meadows; requires cliffs or rock outcroppings for nesting.	Present. A transient which occasionally forages on site. One individual was observed on site by LSA biologists.
Mountain Plover (<i>Charadrius montanus</i>)	CSC	A winter visitor to the grasslands and disced fields of California's Central Valley.	Possible. The non-native grassland, especially the area used for dry farming, provides winter foraging habitat for Mountain Plovers.
Long-eared Owl (<i>Asio otus</i>)	CSC	Occurs in riparian woodlands and forests of state.	Possible. Riparian woodlands along Marsh Creek provide suitable habitat for this species.
Burrowing Owl (<i>Speotyto cunicularia</i>)	CSC	Nests in abandoned burrows of California ground squirrels in open grasslands.	Present. Ground squirrel burrows are limited in number onsite, but a Burrowing Owl was observed by LSA biologists.

r = Indicates revised line; i.e., revision to Draft EIR made in response to public comment.

of these sensitive natural communities are under continuing threat from future development, they are considered "highest inventory priorities" for future conservation.¹

An additional natural community designated by the CNDDDB as "threatened" exists adjacent to the project site: the freshwater marsh located around the margins of Marsh Creek Reservoir. The considerable wildlife values associated with this marsh derive from its association with the dense riparian habitat along its outer margin and the open water of the reservoir. The marsh itself is used for nesting by Red-winged and Tri-colored Blackbirds (*Agelaius phoeniceus* and *A. tricolor* respectively), Black Phoebes (*Sayornis nigricans*) and Song Sparrows (*Melospiza melodia*). Great Blue Herons, Great Egrets and Green-backed Herons (*Butorides striatus*) forage in its shallow waters. The marsh favors a variety of invertebrates and fish, thus attracting raccoons, striped skunks and Virginia opossums (*Didelphis virginiana*). The marsh also contributes to the productivity of the aquatic habitat of the reservoir, which attracts both resident and winter waterfowl. Common species include American Coots, Ruddy Ducks (*Oxyura jamaicensis*), and Ring-necked Ducks (*Aythya collaris*).

r 2. RELEVANT ENVIRONMENTAL POLICIES AND GUIDELINES

a. Contra Costa County General Plan

The Contra Costa County General Plan includes goals and policies designed to "preserve and efficiently manage open space and other resources in the County." These goals and policies relate to the protection of ecological resources in general, and specifically to threatened and endangered species, sensitive habitats, and water quality. Goals and policies relevant to development on the project site include the following:

Overall Conservation Goals and Policies

- *To preserve and protect the ecological resources of the County.* (Conservation Element, Goal 8-A, page 8-3)
- *To conserve the natural resources of the County through control of the direction, extent and timing of urban growth.* (Conservation Element, Goal 8-B, page 8-3)
- *To achieve a balance of uses of the County's natural and developed resources to meet the social and economic needs of the County's residents.* (Conservation Element, Goal 8-C, page 8-3)
- *Resource utilization and development shall be planned within a framework of maintaining a healthy and attractive environment.* (Conservation Element, Policy 8-1, page 8-3)

¹Ibid.

Mitigation BR-2: Implement the blue oak woodland-related measures in the applicant-proposed Draft Habitat Management Plan. Supplement these applicant-proposed measures with additional HMP tree replacement requirements, including a final count of trees to be affected and an associated *Tree Replacement Plan* for all trees to be affected on the project site. Begin implementation of the *Tree Replacement Plan* before commencing construction activities which will adversely affect oaks with replacement ratios identified in this EIR. Identify suitable tree restoration sites in the HMP. Plan, plant, and monitor replacement blue oaks as specified in this EIR. Include associated contingency measures in the HMP. These measures would reduce the identified impacts to a ***less-than-significant level***.

(a) *Applicant-Proposed Measures.* The project applicant has proposed the following mitigation measures to reduce project impacts on blue oaks:

- Development shall avoid most blue oak woodlands;
- All blue oaks lost to development shall be replaced at a 3:1 ratio;
- Replacement oaks shall be planted in, or adjacent to, existing stands of trees;
- Stands of replacement trees shall be protected from livestock grazing with fencing;
- All replacement trees shall be hand watered and weeded until they are established;
- All plantings shall be monitored to comply with predetermined performance standards.

(b) *Additional EIR-Recommended Measures.* In addition to the above HMP measures proposed by the applicant, require the following HMP refinements as a condition of general plan amendment and rezoning approval:

- Prior to issuance of building permits for project development, a final count of trees to be affected by development shall be made in order to account for any changes in the grading plan.
- A *Tree Replacement Plan* for all trees to be affected on the project site shall be prepared by a qualified forester, arborist, or restoration ecologist; submitted to the Department of Fish and Game for review; and incorporated into the HMP.
- Implementation of the *Tree Replacement Plan* shall begin prior to project construction which will adversely affect oaks of the site.
- Replacement ratios for lost trees shall be 3:1 for trees between 6.5 to 12 inches in diameter and 5:1 for all trees over 12 inches in diameter.

- Suitable *tree restoration sites* shall be identified in the HMP. Wherever possible, mitigation shall consist of infill plantings, although oak tree densities shall not exceed 50 trees per acre, a density common to foothill woodlands of central California.¹
- All replacement blue oaks to be planted onsite shall be from acorns collected from local trees.
- Blue oak replacements shall be planted as small nursery stock (i.e., one- to two-year-old seedlings in tubes or small pots suitable for planting on restoration sites) from November to January.
- A planview planting plan shall be prepared that shows the location of each replacement tree and explains planting details.
- All replacement trees shall be protected from rodents that could girdle young stems.
- The replacement plantings shall be considered successful if 80 percent or more of replacement trees have survived at the end of five years.
- The *Tree Replacement Plan* shall include contingency measures that would be triggered if survivorship falls below 80 percent during the five year monitoring period. Any replanted trees shall be monitored for survivorship for five years beginning the year after they were planted.

Impacts on Valley Sink Scrub. The entire valley sink scrub habitat would be located within the project-proposed *Open Space* area in the Briones Valley. Therefore, the project would have a ***less-than-significant impact*** on this habitat (see Criteria #1-4 under "3. Significance Criteria" above).

The project-designated *Open Space* area includes the entire 30 acres of valley sink scrub identified in the Briones Valley. Thus, no portion of the valley sink scrub habitat would be developed. Although gated entry points to the open space would prevent access by motor vehicles, recreational uses of the open space (e.g., hiking, bicycling and horseback riding) may result in the intrusion of some people into this habitat on the existing network of ranch roads. Since the existing roads do not extend through the valley sink scrub habitat, however, the intrusion of people into this habitat is expected to be relatively minor. Indirect effects on this habitat from the development of areas to the north are considered to represent a less-than-significant impact due to the substantial distance between the valley sink scrub habitat and the development areas.

Mitigation for Impacts on Valley Sink Scrub. No significant impacts have been identified; no mitigation measures are required.

¹Barbour, Michael G., and Jack Major, Terrestrial Vegetation of California, California Native Plant Society, Sacramento, CA, 1977.

- Prior to issuance of building permits for project development, a final assessment of wetland impacts shall be made in order to account for any changes in the grading plan.
- Implementation of wetland mitigation measures required by this EIR shall begin the year following project approval.
- r ▪ Stock ponds will be replaced at a 1:1 ratio.
- r ▪ Other mitigation ratios proposed by the applicant will require jurisdictional confirmation; higher ratios may be required by the USFWS for seasonally ponded areas of the "wet meadow" which provide potential habitat for the federally-listed vernal pool fairy shrimp.
- The goals of the HMP for each kind of wetland mitigation shall be clearly defined. The attributes and ecological functions of each kind of wetland habitat to be affected by the project shall be identified. At a minimum, replacement wetlands shall be constructed that mimic the wetlands to be destroyed. The goals of the HMP shall be stated in terms of expected timing and duration of surface and subsurface hydrology, as well as the plant and animal associations to be present at the end of the monitoring period.
- Measurable performance standards shall be incorporated for each kind of wetland mitigation. These performance standards shall include empirical measures of soil saturation and/or surface ponding during the winter and spring, plant and animal diversity, plant cover, etc. The physical and biotic attributes of existing onsite wetlands shall be determined by means of a thorough study so that the performance standards adopted for the replacement wetlands will ensure that they function as the existing wetlands do. Milestones shall be established during the monitoring period, at which time it shall be determined if the replacement wetlands are on track to meet the final performance standards at the end of the monitoring period.
- All replacement wetlands shall be located in areas where the soils and surface and subsurface hydrology are suitable for naturally functioning wetlands of the types to be created.
- No replacement wetland shall be located such that its construction will inevitably result in impacts to nearby existing wetlands or their flora and fauna.
- A detailed implementation plan shall be prepared. The plan shall include mapped locations of each replacement wetland, construction plans, methods of inoculating replacement wetlands with soils from existing wetlands, planting plans, and other relevant information.
- Replacement wetlands shall be monitored annually for at least five years. The USFWS may require a longer monitoring period where replacement wetlands are also intended to provide habitat to vernal pool fairy shrimp. A detailed monitoring protocol shall be developed that identifies when monitoring will occur, survey methods, and other provisions.

- The final HMP shall include contingency plans to be developed if any of the replacement wetlands fail to meet specified objectives. These contingency plans shall provide for assessment procedures so that the reasons for failure can be identified. Contingency measures will vary depending on the reason for failure. For example, if failure is due to inadequate surface or subsurface water, then the replacement wetlands may have to be relocated to a site where surface and subsurface water is available and adequate. If the soils of replacement vernal pools are not suitable for vernal pool formation, then an area with suitable soils shall be identified and the replacement vernal pools re-constructed there.
- The applicant shall otherwise comply with Section 404 of the Clean Water Act, the federal Endangered Species Act, and Section 1603 of the California Fish and Game Code. This will require review and approval of the *Wetland Mitigation Plan* by the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and California Department of Fish and Game.

Impact BR-5: Degradation of Water Quality in Marsh Creek and Downstream Wetlands. Project-related stormwater runoff pollution could adversely affect the biotic values of Marsh Creek and downstream wetlands, representing a ***potentially significant impact*** (see Criteria #1, #3 and #4 under "3. Significance Criteria" above).

Stormwater runoff generated from construction sites, landscaping, and paved surfaces often contains sediment, oil, grease, trace amounts of heavy metals, and pesticide and herbicide residues. It is impossible to predict the magnitude of future non-point source pollution that could be generated from the project, but depending on site management practices, the magnitude could be sufficient to adversely affect the biotic values of Marsh Creek and downstream waters to which it is tributary. This creek provides potential habitat for the federally endangered California red-legged frog, a California species of special concern, the western pond turtle, and numerous other aquatic organisms.

Mitigation BR-5: Implementation of *Mitigations D-7 through D-10* in EIR section IV.E (Drainage, Flood Control, and Water Quality) would reduce the identified impacts to a ***less-than-significant level***.

such as dogs and traffic, and enhancing the habitat of kit fox predators such as coyote and red fox. The project would result in the destruction or isolation of 16 of the 29 ground squirrel colonies found during a cursory den survey of the project site by LSA in the spring of 1994, resulting in the loss of an important potential food source for the kit fox. The proposed closure of Marsh Creek Road south of Marsh Creek Reservoir would partially offset these impacts, however, by eliminating vehicle traffic in the southern portion of the site within the project-designated Open Space area.

(c) *Restriction of Kit Fox Migratory Movement.* Introduction of residential and commercial land uses on the project site has the potential to reduce the free movement of kit foxes through portions of its northern range. This would endanger regional movement corridors that provide linkages between the location of historic sightings at Black Diamond Mine Regional Park, Round Valley Regional Park, the Los Vaqueros Reservoir watershed and the Byron Airport.

(d) *Construction-Related Kit Fox Mortality and Disturbance.* Trench excavation, site grading and other construction activities could potentially cause direct kit fox mortality by destroying occupied dens, or could result in decreased reproductive success by eliminating natal dens during non-breeding periods. Vehicular traffic could also result in direct mortality. Kit foxes may be attracted to stored pipe and construction equipment, further increasing the potential for construction related impacts.

Mitigation BR-6: Demonstrate required jurisdictional approval of the applicant-prepared Habitat Management Plan (HMP), including measures proposed in the HMP to mitigate the following: (a) permanent loss of kit fox habitat (e.g., preservation of an area of compensatory habitat acceptable to the jurisdictional agency(s)); the applicant's Draft HMP proposes a contiguous area of 2,716 acres; this EIR analysis indicates that an area of 3,484 acres should be required); (b) degradation of existing kit fox habitat (special management measures for the preserved habitat); (c) restriction of migratory movement (wildlife movement corridors, undercrossings, fencing); and (d) construction-related mortality and disturbance. In addition, modify the HMP to provide additional compensatory habitat and to incorporate creation of ten artificial den complexes in the Shones Valley and North Hills portion of the project. Implement the HMP as required by the jurisdictional agency(s). Combined with Mitigation BR-5, these measures would reduce the identified impacts to a *less-than-significant level*.

(a) *Applicant-Proposed Measures.* The applicant has proposed the following specific measures in the Draft HMP and a clarification letter to mitigate impacts to kit fox habitat:

Mitigations for Permanent Loss Of Kit Fox Habitat. Mitigation for permanent loss of habitat requires the set-aside or acquisition of compensatory habitat. The project applicant has committed to the preservation of 2,716 acres of open space on the northern and western

¹ = Indicates revised line, i.e., revision to Draft EIR made in response to public comment

portions of the project site, which would be managed for the San Joaquin kit fox.¹ Of these 2,716 acres, all but 23.6 acres of Great Valley mixed riparian forest are suitable habitat for the kit fox. The riparian habitat is less likely to be used by kit fox than adjoining grasslands. The dedicated open space shall be managed as discussed above in the *Mitigation BR-1* and as discussed in (b) below for degradation of kit fox habitat.

Mitigations for Degradation of Existing Kit Fox Habitat. The Draft HMP describes a conceptual resource management plan for biotic habitats within the proposed open space area of the project. This plan includes a number of measures for the management of these habitats in a manner that would improve their suitability for the San Joaquin kit fox. Some of these measures have been listed above under *Mitigation BR-1*. In addition, the applicant shall implement the following measures from the Draft HMP:

- Rodenticides on habitat mitigation lands within the dedicated open space shall not be used. Use of rodenticides within developed areas shall be limited.
- Contra Costa County leash laws shall be strictly enforced within the dedicated open space lands. Unleashed dogs shall not be permitted within the open space habitat mitigation lands.
- Public access to the mitigation lands shall be limited to pedestrian and equestrian uses on designated fire roads and trails.
- Exclusionary fencing shall be constructed along both sides of the major thoroughfare and other arterial streets.
- r ▪ A program to manage the red fox and coyote populations shall be implemented if monitoring studies indicate that red foxes are having a negative impact on kit fox use of mitigation lands within the dedicated open space.
- A five-year monitoring program shall be implemented to ensure that the grazing management practices and other proposed mitigation measures are resulting in the desired habitat improvement.

Mitigations for Restriction of Migratory Movement. The proposed development plan dedicates most of the western portion of the property as permanent open space, and leaves an open space area along the property's northern boundary. In between these two open space areas would be the Golf Course Residential subarea, Planning Areas 1, 2, 3, 4, 5, 30, 31, and 32 (single- and multi-family residential uses), and smaller areas of open space (see Figure 57). Measures proposed by the project applicant and this EIR include the following:

- The southern and western portions of the Cowell Ranch shall remain as dedicated open space that shall facilitate regional movement of the San Joaquin kit fox through the site from occupied habitats to the south to other habitats to the north.

¹LSA Associates, Draft Habitat Management Plan, 1996.

additional wetland habitat to be developed also provides potential habitat for vernal pool fairy shrimp and longhorn fairy shrimp.

Mitigation BR-9: Conduct additional vernal pool fairy shrimp and longhorn fairy shrimp surveys according to USFWS survey protocols to assess impacts of potential to existing vernal pool and longhorn fairy shrimp; replace identified shrimp habitats to be lost (wetlands occupied by the shrimp) at a ratio approved by the jurisdictional agency(s). The applicant and this EIR recommend a 2:1 ratio. Limit mosquito abatement practices on the project site. In combination with *Mitigation BR-4*, this measure would reduce the identified impact to a ***less-than-significant level***.

(a) *Applicant-Proposed Measures.* The applicant has proposed the measure below to mitigate impacts to vernal pool and longhorn fairy shrimp from project development:

- For purposes of mitigation, wetlands occupied by vernal pool and longhorn fairy shrimp that would be lost to proposed development shall be replaced at a 2:1 ratio.

(b) *Additional EIR-Recommended Measures.* In addition to the HMP measures proposed by the applicant, require the following HMP refinements as a condition of general plan amendment and rezoning approval.

- r ▪ The applicant will comply with all provisions of the federal endangered species act and will consult with the U.S. Fish and Wildlife Service prior to project construction that would potentially harm vernal pool fairy shrimp populations.
- r ▪ Conduct additional surveys for vernal pool fairy shrimp and longhorn fairy shrimp according to USFWS survey protocol in suitable vernal pools, seasonal marsh and seasonally ponded wet meadows within proposed development areas. Such areas would include all topographic depressions holding water continuously for at least three to four weeks of the winter.
- r ▪ Mosquito abatement measures shall not be implemented within any seasonal wetlands unless there is a demonstrated and compelling need for such measures. When mosquito abatement measures are clearly warranted, they shall be limited to the application of BTI, a natural pesticide consisting of a bacterium that attacks mosquito larvae. Under no circumstances shall mosquito fish be introduced to seasonal wetlands.

Impact BR-10: Impacts on California Tiger Salamander. The project would result in the loss of 4.05 acres of aquatic breeding habitat of California tiger salamanders (a federal candidate endangered and state listed species of special concern), plus 1,029 acres of potential terrestrial aestivation habitat for California tiger salamanders. This represents a **potentially significant impact** of the project (see Criterion #1 under "3. Significance Criteria" above).

The development of Planning Areas 4, 24, 25, 27, 29, 30, 31, 32, and 33 (single- and multi-family residential, commercial, and parks and recreation uses) would eliminate a total of nine stock ponds that now serve as breeding habitat for California tiger salamanders. Approximately four acres of aquatic habitat currently used by California tiger salamanders would be lost to this development.¹ The project would also eliminate approximately 1,070.2 acres of potential aestivation habitat (i.e., areas where California ground squirrels and pocket gophers provide burrows for overwintering tiger salamanders), consisting of 1,018.7 acres of non-native grassland, 38.0 acres of cropland, and 13.5 acres of blue oak woodland. Portions of the existing onsite orchard could also provide marginal aestivation habitat (i.e., summer habitat), wherever pocket gophers and ground squirrels have been allowed to create burrows (primarily around their margins); tiger salamanders are known to use burrows once vernal pools have dried.

Populations of California tiger salamanders have declined throughout much of their range as seasonal wetland breeding habitat has been lost to agricultural and urban development. This species has been designated a candidate species for federal listing as threatened or endangered. The State of California has designated the California tiger salamander a "species of special concern."

Mitigation BR-10: Incorporate a *California Tiger Salamander Management Plan* in the project final HMP to mitigate identified project impacts. Together with *Mitigations BR-1, BR-4, and BR-8* above, this measure would reduce the identified impacts to a **less-than-significant level**.

A final *California Tiger Salamander Management Plan* with clearly-stated goals, performance standards, and contingency measures (should the performance standards not be met) shall be developed and incorporated in the final HMP. The plan should include the following measures:

- As indicated in *Mitigation BR-4*, replacement breeding habitat will be constructed prior to project construction (i.e., the first year following project approval).

¹LSA Associates, Inc., Draft Habitat Management Plan, 1996.

- r ■ Project construction that would affect existing breeding habitat should not occur during
r the breeding season (December through May);
- r ■ Adult salamanders should be collected during one or more breeding seasons prior to
r project construction within construction impact zones and relocated to the replacement
r breeding habitat constructed within the open space preserve. Methods of collection
r (i.e., flashlight searches during the rainy season, directional fencing that concentrates
r salamanders at collection points, etc.) should be identified in the final HMP.
- Barriers shall be constructed along roads and rear property lines of the most intensely
developed areas as already described in the Draft HMP to restrict tiger salamanders to
areas of designated open space.

Mitigation for Cumulative Impacts. No significant impacts have been identified; no additional mitigation measures are required. However, to the extent that the above-recommended *Mitigations BR-1* through *BR-12* are implemented, the effects of cumulative development would be further reduced.

r **Impact on Los Vaqueros Watershed.** Development on the project site could result in
r (1) loss of foraging habitat for any terrestrial vertebrates whose home range includes the Los
r Vaqueros Watershed and a portion of the project site; and (2) development within animal
r movement corridors through the project site, such that migratory, home range and dispersal
r movements of terrestrial vertebrates moving from the Los Vaqueros watershed to other
r suitable habitats north of the project site is permanently blocked. This impact would be offset
r by project preservation of 2,700 acres of onsite open space and a possible additional 700
r acres of offsite kit fox habitat, and would therefore represent a *less-than-significant impact*.

r Resource management plans for the Vasco Caves Regional Preserve (see Vasco Caves
r Regional Preserve, Draft Resource Management Plan) and the Los Vaqueros watershed focus
r on the protection and management of sensitive natural resources, including the San Joaquin
r kit fox and red-legged frog. The proposed project sets aside approximately 2,700 acres as
r open space managed for sensitive biotic resources. An additional 700 acres of existing kit fox
r habitat may be provided in a yet-to-be designated location offsite. Onsite open space would
r be contiguous with the Los Vaqueros watershed lands to the south (see Figure 17). This
r open space includes nearly all of the Briones Valley, thus providing San Joaquin kit foxes and
r other terrestrial vertebrates of the Los Vaqueros watershed a direct route to the Black
r Diamond Mines Regional Preserve. Furthermore, this open space would be managed so as
r to improve habitat for sensitive species. The project therefore would not be expected to affect
r foraging habitat and animal movement corridors on the watershed lands.

r **Mitigation for Impact on Los Vaqueros Watershed.** No significant impacts have been
r identified; no additional mitigation measures are required. However, to the extent that the
r above recommended *Mitigations BR-1* through *BR-12* are implemented, the effects of
r cumulative development on the Los Vaqueros Watershed would be further reduced.

unauthorized recreational use of the old mine workings). HLA has recommended mining as the best alternative to removing the hazard.¹

It is estimated that if the remaining onsite deposit were mined again, it could yield 3.0 million net tons if the deposit were mined down to the level of the valley floor, and 7.0 million net tons if it were mined down to sea level.²

There are two active Domengine Sandstone quarries in the vicinity of the site, the Unimin quarry and the Anderson quarry. The Unimin quarry mines the sand for use in manufacturing glass. The Anderson quarry mines the Domengine for use in trench backfill and general construction. Of the three quarry sites, the project site deposit is considered to be of highest quality.³

r 2. RELEVANT ENVIRONMENTAL POLICIES AND GUIDELINES

(1) Contra Costa County General Plan Policies. According to the Contra Costa County General Plan, the Domengine Sandstone *"...is a valuable commodity for the continued economic vitality of Contra Costa County, as it is the sole deposit of this material in the State of California, and an important resource nationally. Domengine Sandstone is used by Pacific Gas and Electric Company as trench backfill and is a primary ingredient in the manufacture of heat-resistant glass used in the national space program...This plan calls for the protection of the entire sandstone resource area."*⁴ The following General Plan goals and policies address protection of this mineral resource:

- *To ensure the continued viability of mineral resource extraction operations which are important to the county's economy.* (Conservation Element, Goal 8-M, page 8-55)
- *To protect areas of identified valuable mineral resources from incompatible nearby land uses through zoning and other land use regulations.* (Conservation Element, Goal 8-N, page 8-55)

The General Plan further states:

- *Incompatible land uses shall not be permitted within the mineral resource impact areas identified as containing significant sand and gravel deposits. Incompatible land uses are defined as land uses inherently incompatible with mining and/or uses that require a high*

¹Harding Lawson Associates.

²Byron Cowell Ranch Prospect Reconnaissance Geological Drilling Report, November 21, 1990.

³Ibid.

⁴Contra Costa County, Contra Costa County General Plan, 1990-2010, July 1996, *Conservation Element*, page 8-52.

mines (i.e., slope stability implications); section IV.M, Public Health and Safety, which addresses safety impacts associated with unauthorized recreational use of the sand mine area; and section IV.G, Biological Resources, which describes biological resource impacts associated with development of the sandstone deposit.

Impact MR-1: Project Preclusion of a Significant Mineral Resource. The project proposes residential development on a portion of the onsite Domengine Sandstone deposit, which has been identified as a *"significant mineral resource area"* by Contra Costa County. As a result, the project would result in a ***potentially significant impact*** on an existing mineral resource unless the sand were mined prior to development (see "3. Significance Criteria" above).

Figure 58 illustrates that the project would result in the development of a portion of the onsite Domengine Sandstone deposit with medium density single-family residential and high density multi-family residential development (see Planning Areas 39 and 40 on Figure 58). The applicant's phasing plan indicates that this portion of the project would be developed between 2000 and 2010 (see section III, Project Description). The project development plan does not identify any special treatment for the onsite sandstone deposit.

Mitigation MR-1: Phase development to permit mining and submit an approved *Mine Closure and Reclamation Plan*. Implementation of these measures would reduce the identified mineral resource impact to a ***less-than-significant level***.

These measures are described in more detail below:

- (a) *Phased Development to Permit Mining.* Phase project development in the vicinity of the sandstone deposit in a sequence that would permit full mining of the resource. Development of Planning Areas 36, 39, 40, 42, 44, 45, 46, 49, and 50 should not occur until the sandstone has been mined. Potential buyers of property surrounding the sandstone deposit should be formally notified of the potential for mining onsite.
- (b) *Mine Closure and Reclamation Plan.* In order to prevent adverse environmental impacts from occurring as a result of the mining, implement the following mine closure and reclamation steps:
- (1) revise the project to include mining of this resource as part of the proposed project activities,
 - (2) further research and evaluate the potential significance of historic mining artifacts and prehistoric resources associated with associated archaeological site CA-CCo-673H (see EIR section IV.I, Cultural Resources) and mitigate as warranted, and

(3) either demonstrate to County satisfaction that an adequate sand mine closure and reclamation plan has already been prepared that will effectively prevent significant interim adverse impacts (i.e., those that would occur after mining, but prior to development) related to visual factors, soils and geology, hydrology, vegetation and wildlife, air quality (dust control), public health, and noise; or prepare such a plan that includes adequate measures to prevent such impacts.

Impact MR-2: Secondary Impacts of Mine Operation—Project Development Adjacent to an Identified Mineral Resource. The project would enable residential development adjacent to the onsite Domengine Sandstone deposit. If the deposit is to be mined (see *Mitigation MR-1* above), this adjacent development would be incompatible with mining activities (visual impacts, air quality/dust impact, noise impacts, traffic conflicts). These possible effects represent a potentially ***significant secondary impact*** (see "3. Significance Criteria" above).

In addition, the interim mine operation, in combination with the other two operating mines in the area (Unimin Quarry and Anderson Quarry), may generate cumulative truck traffic, noise, and air quality impacts.

Mitigation MR-2: Require phased development to permit mining, as recommended under *Mitigation MR-1* above. Require mining operation compliance with CEQA (i.e., completion of CEQA-required environmental documentation) and implementation of any identified mitigation needs). This measure would reduce this impact to a ***less-than-significant level***.

No additional historic artifacts were observed by H&A. However, a single bedrock mortar grinding station (BRM) cavity and three small "acorn" dimples/cupules were located in an outcropping of sandstone at the south end of the site along the crest of the ridge, and a two- to three-meter diameter circular depression was observed 20 to 25 meters northeast of the BRM. The mining operation probably displaced or destroyed other outcroppings. H&A concurred that this site has additional research potential for both historic and prehistoric resources.

(13) CA-CCo-674H. This site includes a dam structure and bridge built over Marsh Creek adjacent to the John Marsh stone house. The structure is not shown on the 1914 USGS map of the area and no other indication of its age was found by WSA. The dam structure is constructed of thick concrete with the east side of the dam divided into nine segments. A large pile of wood planking, which probably covered the top of the dam, is located in the creek below the dam, along with more recent trash. Additional archival research was recommended by WSA to determine the potential historical significance of the site.

No additional historic features or artifacts were observed by H&A. H&A concurred that the site should be subject to additional research.

(14) CA-CCo-675H. This site consists of a cement-lined irrigation canal and associated lock mechanisms. Within the project site, the canal extends from Concord Avenue on the east side of the PG&E gas terminal and compressor station southward a distance of approximately 1.5 kilometers to Marsh Creek. No other features or artifacts were recorded. WSA research revealed that the canal was part of a regional irrigation system built by the Balfour-Guthrie Investment Company between 1912 and 1914. Based upon its association with events important to the history of the region and integrity of the canal, this site was determined to be potentially historically significant.

No artifacts or other features were observed by H&A.

(15) CA-CCo-676H. This site contains an eight-by-five meter diameter rock cairn comprised of perhaps 250 to 300 lichen covered fossiliferous sandstone cobbles and small boulders. The cairn is located along a narrow ridgeline approximately 800 meters above and south of Dry Creek and Briones Valley Road. WSA dismantled the rock pile and excavated six shovel probes to investigate the nature of the cairn. No cultural materials were recovered from any of the probes or the surrounding site surface. The function of the rock pile was not determined by WSA, but they speculated that it may have served as a prehistoric or historic trail marker or some sort of defensive structure. The site was not considered historically significant by WSA.

H&A also failed to discover any historic or prehistoric artifacts. They did note that the entire ridgeline displays occasional surface outcroppings of sandstone containing mollusc fossils, and thus the pile of rocks could be a by-product of fossil hunters, or mineral prospectors searching for silica.

(16) CA-CCo-677H. This site was identified by WSA as a historic homestead consisting of a collapsed house, a standing concrete storage shed, two concrete and stone foundations, an open air roadside fruit stand, farm equipment, and a refuse dump. The site is situated on the east bank of Marsh Creek, fronting the south side of Marsh Creek Road. Two shovel probes located in the refuse dump yielded no diagnostic artifacts. Several artifacts collected from the surface of the dump were determined by WSA to have been manufactured in the 1930s. These items led WSA to conclude that the site was probably first occupied in the late 1920s or early 1930s, with use perhaps continuing into the 1960s or later. The site was not considered a significant cultural resource.

H&A observed additional historic and prehistoric material on the site. The collapsed house is a wood-frame structure constructed with square-headed nails. Round nails came into use in the late 1890s but use of square nails continued to about 1910 due to existing stocks. Sandstone slabs found nearby may be the remains of the house's foundation. A number of other diagnostic artifacts were also discovered.

In addition to these historic resources, H&A discovered evidence of prehistoric resources on site CA-CCo-677H. A sandstone pestle (fire-affected, broken into two pieces, and displaying plow scars) was found in the creekbank just west of the collapsed house. Also, a hydrated obsidian biface base fragment (i.e., a spear point) and two small chert flakes were observed in the field east and southeast of the concrete storage shed. These items suggest casual prehistoric use of the area, indicating that a larger site may be located nearby, or that the resources of the site have been obscured by the historic uses of the area.

r 2. RELEVANT ENVIRONMENTAL POLICIES AND GUIDELINES

r This subsection summarizes pertinent Contra Costa County and City of Brentwood policies
r and guidelines that address cultural resources.

a. Contra Costa County General Plan Policies

Contra Costa County General Plan policies that relate to cultural resources are as follows:

- *Areas which have identifiable and important archaeological or historic significance shall be preserved for such uses, preferably in public ownership. (Open Space Element, Policy 9-28, page 9-16)*
- *Development surrounding areas of historic significance shall have compatible and high quality design in order to protect and enhance the historic quality of the area. (Open Space Element, Policy 9-30, page 9-16)*

setting by the project's proposed major thoroughfare would represent a potentially significant impact.

Mitigation CR-4: Avoid the John Marsh house and its contributory setting. If avoidance is not feasible, develop and implement an appropriate mitigation program in cooperation with the California Department of Parks and Recreation. This measure would reduce the impact to a ***less-than-significant level***.

Determine the extent to which the setting of the John Marsh house contributes to its continued eligibility for listing on the National Register of Historic Places.

Avoid the John Marsh House and its contributory setting. If avoidance is not feasible, develop and implement an appropriate mitigation program in cooperation with the California Department of Parks and Recreation. The mitigation program would be consistent with the County's *Principles and Guidelines for Cowell Ranch* Guideline 4.e which states that "the development plan for Cowell Ranch should include a comprehensive restoration and development program for the John Marsh Home to serve as a living demonstration for the area's rich early history," and shall adhere to the approaches, procedures, limitations and criteria specified in Appendix K of the state CEQA guidelines.

Also, comply with all applicable procedures and requirements of Section 106 of the National Historic Preservation Act, including establishment of a Memorandum of Agreement with the State Historic Preservation Office that specifies the mitigation required for Section 106 compliance.

Impact CR-5: CA-CCo-674H. The project could disturb CA-CCo-674H. Such disturbance would represent a ***potentially significant impact*** (see Criteria #1-3 under "c. Significance Criteria" above).

CA-CCo-674H, a dam structure and bridge over Marsh Creek adjacent to the John Marsh Home State Park property, could be disturbed by proposed development of a park at this location and/or by future recreational activity at the park.

Mitigation CR-5: Retain a qualified historian to document site CA-CCo-675H to Historic American Engineering Record (HAER) standards and, if significant, avoid the site or implement a mitigation program that meets the objectives of County General Plan Policy 9-28. This measure would reduce the impact to a ***less-than-significant level***.

J. VISUAL FACTORS

The following EIR section describes the project's visual setting; environmental goals and policies related to visual factors; criteria for determining the significance of visual impacts; the project's potential visual impacts; and mitigation measures warranted to reduce identified significant visual impacts.

1. SETTING

a. Regional and Local Visual Character

(1) Regional Context. Figures 1 (Regional Location), 2 (Local Vicinity Map), 16 (Subregional Development and Open Space Areas), 17 (Local Development and Open Space Areas), and 18 (Local Aerial Photograph) in section IV.A of this EIR (Land Use) illustrate the physical relationship of the site to its surrounding vicinity. As shown in the figures, the Cowell Ranch site is located along the western edge of the San Joaquin Valley and against the eastern slopes of the Diablo Range. Mt. Diablo is the most prominent regional natural feature. The top of Mt. Diablo is approximately 10.5 air miles west of the center of the project site.

Historically, the East County's identity has been as an agricultural area. The visual landscape of the subregion remains predominantly rural, with a mix of open space, agricultural, rural residential, and suburban features. The visual quality of the subregion is topographically diverse, but largely rural.

An expansive 20-to-30-mile wide landscape of predominantly undeveloped range land extends from the Pittsburg-Antioch corridor south to the Tri-Valley area of Livermore-Pleasanton-Dublin, and from central Contra Costa County to the eastern County boundary and beyond into San Joaquin County and the Central Valley. Croplands and orchards are scattered throughout this subregion along its alluvial valleys. Cattle grazing and dry farming occurs on the surrounding plains and foothills. These pastoral elements represent a valued regional visual resource, providing relief from the urban landscape of the central Bay Area.

(2) Local Context. As illustrated on Figure 17 in EIR section IV.A (Land Use), the local landscape includes the expanding community of Brentwood to the north, agricultural and range lands to the west, east, and southeast, and the Kellogg Creek/Los Vaqueros watershed to the south.

The visual character of the Brentwood community is made up of a combination of agricultural lands and urban development.

The City originally developed in a grid pattern parallel and perpendicular to the SPTCo railroad tracks (see Figure 18, Local Aerial Photograph, in section IV.A, Land Use). Early growth concentrated around the downtown area, as evidenced by the traditional street patterns and mature trees and landscaping. As the city has expanded, the street pattern has evolved to reflect a more conventional north-south grid. More recently, ongoing suburban development on the periphery of the central area has resulted in a change in the community's historic visual character, with a transition outward from the downtown to a newer, more suburban form.¹ As a result, the landscape between central Brentwood and the project site has undergone substantial recent change from rural to urban, as illustrated by Figures 17 (Local Development and Open Space Areas) and 18 (Local Aerial Photograph) in EIR section IV.A (Land Use). Many new residential subdivisions with immature landscaping, broad arterial streets, homogenous architecture, and modern shopping centers have contributed to the suburban appearance.² Several recently approved and currently pending residential and mixed-use development projects indicate continuation of this trend (see section IV.A.1.c).

With the exception of the south Brentwood suburban and scattered rural elements described above, the existing landscape surrounding the project site remains predominantly open range dominated by barren hills and ridges, with scattered orchards and croplands in the alluvial valleys (see Figure 18 in section IV.A, Land Use).

b. Onsite Visual Features

Similar to its immediate surroundings, the visual character of the expansive, 6.7-square-mile project site includes a diverse visual landscape of hill ranges, gently sloping valleys, flat plains, and creek beds. The site is bounded and traversed by several rural roads. Most of these roadways are locally-designated "scenic" or "gateway" routes. Although many of the site's interior valleys are concealed from offsite viewpoints by hills and ridges, extensive areas of the site are visible from surrounding travel routes and from other offsite vantage points.

Figure 59 diagrams some of the principal visual factors associated with the project site, including:

- County-designated *scenic expressways* and *scenic routes*;
- City of Brentwood designated *gateway routes* and *gateway locations*;
- City of Brentwood designated *topography of visual significance*; and
- Significant onsite ridges and hilltops, including high points above the 400-foot elevation.

A discussion of each of these considerations follows.

¹The Planning Center, Final Environmental Impact Report for the Brentwood General Plan Update, prepared for the City of Brentwood, July 1993, page 106.

²Ibid.

r = Indicates revised line; i.e., revision to Draft EIR made in response to public comment.

Figure 59 also shows the location of 15 representative vantage points surrounding the site. Photographs of the view from each of these locations are shown on pages IV.J--6 through 10.

(1) Onsite Natural Scenic Features. The hillside slopes onsite range from gentle to moderately steep; ridge crests are rounded and gently sloping. The principal onsite topographic features are the two northwest-trending ridge systems which flank the Briones Valley (see Figure 59). Other defining topographic features include the north-south trending Marsh Creek Valley, Marsh Creek, and the Marsh Creek Reservoir; and a smaller, east-west oriented valley at the northwest portion of the site. Extensive areas of the site are also composed of relatively flat bottoms of the Briones and Marsh Creek Valleys.

Marsh Creek is a particularly distinctive onsite visual feature, curving northward through the site towards Marsh Creek Reservoir, Brentwood, and the San Joaquin River. Other onsite streams include Dry Creek, Kellogg Creek, and Briones Valley Creek.

The site is predominantly rolling grassland (85 percent), with some freshwater marsh and meadow features in the Briones Valley and on other valley bottoms, several patches of valley scrub in the Briones Valley, and three relatively small patches of oak savanna on the north facing slopes within the northwest, eastern, and southwestern areas. Riparian vegetation is distinctly visible along portions of Marsh Creek. The 240-acre apple orchard along Walnut Boulevard, and 68 acres of hay field along Marsh Creek upstream of Marsh Creek Reservoir, are additional vegetative features in the landscape.

(2) Onsite Hilltops and Ridges. Figure 59 illustrates the principal hilltops and ridgelines within the project boundary. The County General Plan does not designate any *major scenic ridgelines* on the project site. However, the site does include a number of visually significant hills and ridgelines that are visible from other portions of the project site and from surrounding areas, including locations in Brentwood. The Brentwood General Plan designates the area as containing topography of visual significance (see Figure 59). To provide a basis for evaluation of project visual impacts, Figure 59 identifies significant onsite hilltops and ridgelines, although these areas of the site are not classified as *major scenic ridgelines* in the County General Plan.

(3) Marsh Creek Reservoir. Marsh Creek Reservoir at the center of the project site, although not a part of the Cowell Ranch property or project, is another prominent and distinguishing visual feature. The reservoir is surrounded by a scenic band of willow and cottonwood trees.

(4) John Marsh Home. The undeveloped John Marsh Home State Park, including the John Marsh "Stone House" (1856) and associated structures, although not a part of the Cowell Ranch property or project, are nevertheless historically and visually distinctive features near the center of the site.

(5) Electrical Transmission Lines. The site is traversed by three overhead PG&E 230 kV electrical transmission lines, as mapped on Figure 4, Existing Site Features Map, in EIR section III, Project Description. The lines are visible in photographs 7, 10, and 15 which follow. The lines are supported by lattice steel tower structures approximately 120 feet high and typically spaced at 1,800-foot intervals. These lines and towers are visible in distant views of the site, and are particularly prominent when viewed from nearby or onsite viewpoints. The three onsite lines are the Pittsburg-Tesla and Contra Costa-Newark, which are within 100-foot-wide easements, and the Contra Costa-Tesla, which is within a 75-foot-wide easement.

- r (6) PG&E Gas Terminal and Compressor Station. Figure 59 and photograph 15 show the
r PG&E gas terminal and compressor station located on Concord Avenue. Although not part of the Cowell Ranch property, the facility is surrounded on three sides by the project site. As the photo indicates, this facility includes medium scale, metal clad, utility buildings, exterior mechanical equipment and storage tanks, an array of 15 exterior luminaires (approximately 30 feet high), and a microwave communications tower of similar height (30 to 40 feet). The facility is surrounded by wire ("Cyclone") fencing.

c. Representative Views of the Project Site

Figure 59 maps the location of 15 vantage points surrounding the project site that, based on field survey by the EIR authors, are considered representative of site visual characteristics, visibility and vulnerability to visual impact. Photographs from these viewpoints towards the site are shown on pages IV.J--6 through 10. These views are described below.

(1) Views of the Site from Brentwood. Hillside and ridgeline features of the project site are visible from the southern edges of Brentwood. Photograph 1 (approximate elevation of the viewpoint: 83 feet) shows a 1994 panoramic view towards the site from Balfour Road just east of Griffith Lane. The hillsides and rounded ridges of the north and east sectors of the site, at elevations ranging from approximately 225 to 448 feet, are visible in the intermediate background, approximately two-and-one-half to three miles away from this viewpoint. In the foreground on the far right is the Pulte subdivision, under construction in 1994. The Morrison Homes subdivision is in the immediate foreground on the opposite side of Balfour. Riparian vegetation along Marsh Creek between Brentwood and the project site is visible beyond this property. In the distant background on the far right is Mt. Diablo (elevation: 3,849 feet) and the Black Hills range east of Mt. Diablo, which rise to an elevation of approximately 2,580 feet.

Photograph 2 (approximate elevation: 129 feet) shows a more focused southward view down Concord Avenue toward the site from Balfour Road. Similar to photograph 1, the hillsides and ridges of the north sector of the project site, at elevations ranging from approximately 312 to 448 feet, are visible straight ahead, approximately one and one half miles away. To the left in the intermediate background, the rolling hills of the Spanos property (site of the Brentwood Hills Country Club subdivision now under construction) obscure views of the project site.

r (7) Concord Avenue. As shown by photograph 13 (approximate elevation: 150 feet), the segment of Concord Avenue contiguous to the northeast edge of the project site includes open views of smooth Marsh Creek Valley rangeland in the north sector rising gradually to low r ridges (approximate elevations: 206 to 297 feet). The PG&E Gas Terminal and Compressor r Station is also visible along this segment of Concord Avenue. (Photograph 15 shows a close view of the PG&E facility from the project site.)

(8) Briones Valley Road. As shown by photograph 14 (approximate elevation: 175 feet), the unpaved, gated section of Briones Valley Road along the northern edge of the project site is routed through the smooth hill forms of the north sector. The roadway follows the base of the barren hills, which create a smooth, rolling grassland landscape rising to ridgeline elevations of approximately 255 to 332 feet.

(9) Marsh Creek Trail. As explained in section IV.F.5 (Public Facilities and Services, Parks and Recreation) of this EIR, the EBRPD-planned *Round Valley to Big Break Trail* (the Marsh Creek Trail), which is proposed to connect the Round Valley Regional Park southwest of the site (see Figure 17 in section IV.A, Land Use) with Big Break at the mouth of Marsh Creek just north of Oakley, would follow the channel of Marsh Creek through the project site and would include a staging area near the John Marsh Home State Park. The trail "viewshed" through the site would include foreground views of the Briones Valley floor, riparian areas along the creek (see photograph 5), Marsh Creek Reservoir, and the John Marsh Home, as well as background views of west- and east-sloping hillsides and ridges on the project site.

r 2. RELEVANT ENVIRONMENTAL POLICIES AND GUIDELINES

a. Contra Costa County General Plan Policies

(1) Scenic Route Policies. County- and City-designated "scenic expressways" and "scenic routes" in the project vicinity are illustrated on Figure 59. As shown, the Contra Costa County General Plan (Section 5.9) designates the SR 4 Bypass as a *Scenic Expressway* and Walnut Boulevard, Marsh Creek Road, Camino Diablo, and Deer Valley Road as *Scenic Routes*. The General Plan states that the purpose of scenic route designations is to ensure that new projects approved along these routes are "reviewed to maintain their [the routes'] scenic potential." A *scenic route* is defined in the County General Plan as "a roadway, street, or freeway that traverses a scenic corridor of relatively high visual or cultural value." The following associated policies are pertinent to consideration of project visual impacts:

- *Scenic corridors shall be maintained with the intent of protecting attractive natural qualities adjacent to various roads throughout the county.* (Transportation and Circulation Element, Policy 5-34, page 5-32)
- *Scenic views observable from scenic routes shall be conserved, enhanced, and protected to the extent possible.* (Transportation and Circulation Element, Policy 5-36, page 5-32)

Mitigation V-1: Require modification and refinement of the project P-1 District Development standards for streetscapes with project development area frontages (the SR 4 Bypass, Walnut Boulevard, Camino Diablo, Marsh Creek Road, and Briones Valley Road; see Figure 8 herein) to specify and emphasize special landscape treatment between the roadway and project buildings designed to retain a rural or semi-rural roadside character. While effective implementation of this mitigation, in combination with *Mitigations V-2 through V-12* identified below for project impacts on specific surrounding vantage points, would substantially reduce identified project impacts on the visual character of the local community, the cumulative loss of the local rural character associated with any substantial conversion of the project site to urban use would remain a ***significant, unavoidable cumulative impact*** of the project.

b. Impacts on Specific Offsite Viewpoints

Project impacts on specific offsite vantage points are described below. To support the analysis, CADP Associates, EIR visual simulation consultants, have prepared a series of computer-derived maps (Figures 60 through 70) approximating areas of the site that may be visible (i.e., the approximate "viewshed") from various surrounding roadways and the Marsh Creek Trail after the site has been graded in accordance with the applicant's proposed conceptual grading plan. Two types of "viewshed" maps have been prepared:

- **Corridor viewshed depictions**, which show approximate areas of the site that may be visible, and indicate the approximate length of time that the areas would be potentially visible at a given traveling speed, for the following six adjoining roadways:¹

- (1) Balfour Road (from Deer Valley Road to Walnut Boulevard) (Figure 60);
- (2) Deer Valley Road (segment adjoining project site) (Figure 62);
- (3) Camino Diablo/Marsh Creek Road (from the western project site boundary to Vasco Road) (Figure 64);
- (4) Walnut Boulevard/Vasco Road (segment adjoining project site) (Figure 66);
- (5) Marsh Creek Road (from Camino Diablo to Walnut Boulevard) (Figure 67); and

¹ All viewshed and view cone depictions show areas of the site visible from a height of six to ten feet above ground level (a standard, conservative--i.e., "worst-case"--assumption to account for a person's height when standing or when sitting in an elevated vehicle), and consider existing and planned roadside visual barriers (subdivisions, etc.).

(6) State Route 4 Bypass ("Modified County Alignment" adjoining project site) (Figure 68).

- r ▪ **View cone depictions**, which show areas of the site that may be visible from selected stationary viewpoints on adjoining roadways and properties that contain important focal views of the site. These depictions show the "cone" of potentially visible area from each stationary

viewpoint. View cone depictions have been prepared for the following five vantage points:

- (1) Balfour Road at Griffith Lane (Figure 61);
- (2) Balfour Road at Fairview Avenue (Figure 62);
- (3) Camino Diablo, at a point west of Vasco Road (Figure 65);
- (4) Round Valley Regional Park, at a high point along the Marsh Creek Trail (Figure 69); and
- (5) Morgan Territory Regional Preserve, at a high point along the Marsh Creek Trail (Figure 70).

Based on the corridor and stationary "viewshed" depictions on Figures 61 through 69, the various **study viewpoints** have been generally ranked according to the *approximate degree of project-related visual impact* in Table 60, and the various proposed project **Planning Areas** have been generally ranked according to their approximate degree of overall impact on (visibility from) surrounding study viewpoints in Table 61. The purpose of these two rankings is to provide general guidance to future County and City decision-makers with respect to focusing design review. The general rankings in Tables 60 and 61 have also provided one basis for the impact analysis conclusions and mitigation recommendations below.

It is important to note that the proposed development plan (Figure 8 in section III, Project Description) has been prepared to reflect a general plan and zoning level of detail only, and intentionally does not include details regarding lot patterns, building architecture, or local street layout. Such individual Planning Area details would be determined at the subsequent subdivision map stage. Due to the conceptual nature of the proposed development plan, the analysis in this subsection is based on general conclusions regarding the visibility of proposed project development areas from the selected viewpoints.

The ranking of impacted study viewpoints in Table 60 from *least affected* to *most affected* by the project has been determined based on consideration and weighing ("scoring") of the following factors: the number of urbanized Planning Areas visible from the viewpoint (ranging from 8 to 52), the proximity of these visible Planning Areas to the viewpoint (close, intermediate, distant), the overall degree of exposure (size and portion visible) of these Planning Areas to the viewpoint, the proposed land use designation (development intensity) of these Planning Areas, and the extent of potential hillside and ridgeline development within the visible Planning Areas (if any). Appendix H contains supplemental tables that indicate the findings regarding relative development visibility from each viewpoint that were used to develop these rankings.

Note: This SR 4 Bypass viewshed depiction assumes grade-separated interchange configurations at Marsh Creek Road and Walnut Boulevard, which would elevate the roadway surface to roughly 175 and 225 feet, respectively.

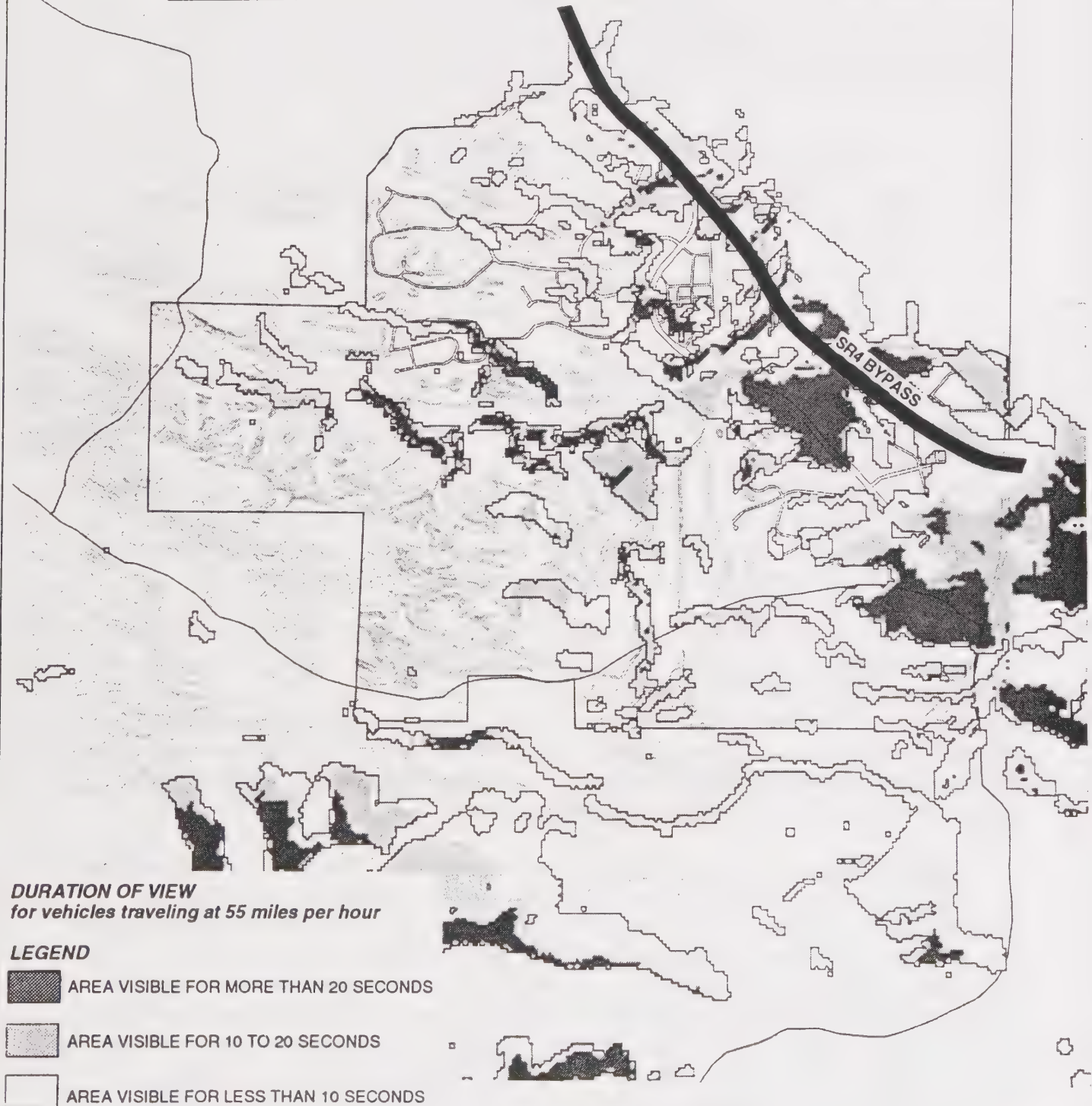


Figure 68
VIEW 9: AREAS OF PROJECT SITE AND BACKGROUND VISIBLE ALONG
THE PROPOSED SR 4 BYPASS
CORRIDOR VIEWSHED DEPICTION FOR "MODIFIED COUNTY ALIGNMENT"

Table 60

r **VISUAL VULNERABILITY RANKING BY VIEWPOINT**

	<u>Viewshed Corridor Depictions</u>	<u>View Cone Depictions</u>	<u>Overall</u>
<i>Most Affected by Project</i>	View 8		View 8
	View 9		View 9
	View 1		View 1
		View 2	View 2
		View 11	View 11
		View 6	View 6
		View 10	View 10
	View 7		View 7
		View 3	View 3
	View 4		View 4
<i>Least Affected by Project</i>	View 5		View 5

SOURCE: Wagstaff and Associates

View 1: Balfour Road (from Deer Valley Road to Walnut Boulevard)

View 2: Balfour Road at Griffith Lane

View 3: Balfour Road at Fairview Avenue

View 4: Deer Valley Road (segment adjoining project site)

View 5: Camino Diablo/Marsh Creek Road (from western project boundary to Vasco Road)

View 6: Camino Diablo One-and-One-Half Miles West of Vasco Road

View 7: Walnut Boulevard/Vasco Road (segment adjoining project site)

View 8: Marsh Creek Road (from Camino Diablo to Walnut Boulevard)

View 9: Proposed SR 4 Bypass (segment adjoining project site)

View 10: Round Valley Regional Park (from high point along Marsh Creek Trail)

View 11: Morgan Territory Regional Preserve (from high point along Marsh Creek Trail)

r Note: See Appendix H for background on viewpoint evaluations.

Table 61

r **VISUAL VULNERABILITY RANKING BY PROJECT PLANNING AREA**

Greatest Visual Impact

Major Thoroughfare, SR 4 Bypass

52, 34, 8, 10, 7

5, 16, 58, 23, 30

9, 31, 37, 21

27, 36, 46, 18

22, 32, 39, 19, 3, 29, 42, 11

40, 59, 61

6, 17, 21, 60, 33, 2, 12, 53, 28, 26

1, 57, 20, 24, 35, 25, 45

43, 44, 47, 48, 49, 50, 54, 55, 56

Lowest Visual Impact

34, 41, 51, 14

No Impact

4, 13, 15

SOURCE: Wagstaff and Associates

r Note: See Figure 8 in section III, Project Description, for locations of proposed Planning Areas. See Appendix H for background on Planning Area evaluations.

The impact ranking of Planning Areas in Table 61 from *lowest* to *greatest* overall visual impact on surrounding viewpoints has been determined based on consideration and weighing of the following factors: the number of study viewpoints from which portions of the Planning Area would be visible, and the average proximity, size and land use designation of these visible portions. The supplemental tables contained in Appendix H were used to develop these rankings.

Impact V-2: Views from Balfour Road. Portions of proposed development in the North Hills, North Village, West Creekside, East Creekside, East Village, and East Hills subareas, as well as portions of the SR 4 Bypass and the proposed project major thoroughfare, would be visible in intermediate and distant views south toward the project site. These intermediate and distant views could include single-family residential development on hillsides and ridgelines in Planning Areas 11, 30, and 52. These changes could substantially and negatively detract from existing views to the south of rangelands, hillsides and ridges, and would represent a ***potentially significant impact*** (see Criteria #1 and #2 under "3. Significance Criteria" above).

- r (a) *Views of Project from Balfour Road Corridor.* Figure 60 generally illustrates the portions
r of the project that may be visible from the Balfour Road corridor extending from Deer Valley Road to Walnut Boulevard. As shown, views of the site along some portions of this corridor would be blocked by urban development in the foreground (e.g., on the Spanos property). However, relatively large areas of high density single-family and low density multi-family
r residential development in the North Hills subarea (Planning Areas 6-10) could be visible in intermediate views to the south from this corridor.

- In distant views, portions of development in the North Village, West Creekside, East Creekside, East Village, and East Hills subareas (Planning Areas 11, 16, 23, 35-38, 45, 46,
r 52, and 58) could be visible, including single- and multi-family housing, commercial uses, business park, public facilities, and parks.

These intermediate and distant views could also include single-family residential development on ridgelines in Planning Areas 11 and 52. Planning Area 52 could include development at a
ridgeline high point that would be visible from the Balfour Road corridor (see Figure 59).

Portions of the SR 4 Bypass and the proposed project major thoroughfare would also be visible in intermediate and distant views from this corridor.

- (b) *View from Balfour Road at Griffith Lane.* Figure 61 illustrates the portions of the project
r that might be visible from Balfour Road at its intersection with Griffith Lane. As shown in the figure, relatively large areas of high density single-family and low density multi-family residential development in the North Hills subarea (Planning Areas 6-11) could be highly visible in intermediate views south toward the project site from this location. In distant views, development in the remainder of the North Hills and in the North Village, West Creekside,

East Creekside, East Village, and East Hills subareas (Planning Areas 17, 18, 23, 29, 30, and 52) could be visible. These visible Planning Areas could be developed with single- and multi-family housing and public facilities. The intermediate and distant views from this vantage point could include single-family residential development on ridgelines in Planning Areas 11, 30, and 52 (including a ridgeline high point in Planning Area 52). Portions of the SR 4 Bypass, planned development north of the project, and the proposed project major thoroughfare could also be visible in intermediate and distant views from this location.

(c) *View from Balfour Road at Fairview Avenue.* Figure 62 illustrates the portions of the project that may be visible from Balfour Road at its intersection with Fairview Avenue. As shown in the figure, relatively small areas of medium and high density single-family residential development in the North Hills subarea (Planning Areas 5-11), as well as the related neighborhood park site, could be visible in intermediate views south toward the project site from this location. In distant views, development in Planning Area 30 (low density single-family residential) in the North Hills subarea, Planning Area 36 (low density multi-family residential) in the East Creekside subarea, Planning Area 37 (community college) in the East Creekside subarea, and Planning Area 52 (medium density single-family housing) in the East Hills subarea, could be visible.

These intermediate and distant views could also include single-family residential development on ridgelines in Planning Areas 11 and 30.

Relatively small portions of the SR 4 Bypass could be visible in intermediate and distant views, and relatively small segments of the proposed project major thoroughfare could be visible in distant views from this location.

(d) *Proposed Residential Design Standards.* The *Cowell Ranch P-1 Planned Unit District Development Standards* proposed by the applicant include development/design standards for residential uses that would help to reduce the impact of the project on views from Balfour Road and other roadways evaluated in this section. These standards include mixing of housing product types, avoiding repetitive massing, and avoiding long expanses of building walls or repetitive forms in multi-family areas.¹

¹Cowell Ranch Project, *Cowell Ranch P-1 Unit District Development Standards*, March 25, 1996, section 4.0 (Development/Design Standards), subsection 4.1 (residential).

Impact V-3: Views from Deer Valley Road Corridor. Portions of proposed development in the Golf Course Residential, North Hills, North Village, West Creekside, East Creekside, East Village, and East Hills subareas, may be visible in intermediate and distant views east toward the project site from this County-designated "scenic route." Intermediate views could include single-family residential development on ridgelines in Planning Area 3. These changes could substantially and negatively alter the rural character and detract from existing views to the east of rangelands, hillsides, and ridges, and would represent a **potentially significant impact** (see Criteria #1-3 under "3. Significance Criteria" above).

Photographs 3 and 4 show the undeveloped rangeland landscape of the Briones Valley along Deer Valley Road, a County-designated scenic route. Figure 63 generally illustrates the portions of the project that may be visible looking east toward the project site from the segment of Deer Valley Road that adjoins the site. Areas of low density multi-family housing and golf course development in the Golf Course Residential subarea (Planning Areas 31 and 32) may be visible in intermediate views from this corridor. Smaller areas of North Hills single-family housing (Planning Areas 1-3 and 6) may also be visible in intermediate views.

Planning Area 3 could include development at a ridgeline high point that would be visible from the Deer Valley Road corridor.

In distant views, portions of the development in the North Village, West Creekside, East Creekside, East Village, and East Hills subareas (especially Planning Areas 38 and portions of 23, 52, 58, and 60) could be visible from portions of the corridor; these Planning Areas would be developed with a variety of uses, including single-family housing and business park uses. Relatively small expanses of the SR 4 Bypass and the proposed project major thoroughfare would also be visible in distant views from this corridor.

Mitigation V-3: Amend the *Cowell Ranch P-1 Planned Unit District Development Standards* proposed by the applicant to include hillside development standards that promote preservation of significant land forms or hilltops, reduction in development intensity, grading limitations on steep slopes, contour grading, revegetation, and sensitive landscaping. Impose these standards on a case-by-case basis when reviewing future development applications involving Planning Areas 1-3, 6, 23, 31-33, 38, 52, 58, and 60, with consideration to views from Deer Valley Road. Implementation of this measure as described under *Mitigation V-2* would mitigate the impact to a **less-than-significant level**.

See *Mitigation V-2* above for discussion of recommended hillside development provisions.

Impact V-4: Views from Camino Diablo/Marsh Creek Road. Views to the north from the approximately 1.4-mile segment of this County-designated "scenic route" between the Marsh Creek riparian corridor and Vasco Road would be dominated by close-range views of large areas of single- and multi-family housing in the East Village and East Hills subareas, as well as the neighborhood park and elementary school in the East Village. These views could include single-family residential development at the high point of a ridgeline in Planning Area 52. Views from Camino Diablo west of Vasco Road would include distant views of development in the North Village and North Hills subareas. These changes would substantially and negatively alter the rural character and detract from existing views of rangelands, hillsides, and ridgelines, and would represent a **significant impact** (see Criteria #1-3 under "3. Significance Criteria" above).

Camino Diablo/Marsh Creek Road, a County-designated "scenic route," has the most extensive project site frontage (approximately 3.2 miles) of all roads surrounding the site. Along the approximately 1.8-mile segment of Marsh Creek Road west of Marsh Creek, at the southwest boundary of the project site, views are currently dominated by rolling grassland range, as shown by photograph 5. Along the approximately 1.4-mile segment of Marsh Creek Road-Camino Diablo east of Marsh Creek to Walnut Boulevard, views include existing onsite alfalfa fields and pastoral, pristine open rangeland landscapes on both sides of the route, as shown by photographs 6, 8, and 9.

- r Figure 64 illustrates the portions of the project that could potentially be visible looking north from the segment of Camino Diablo/Marsh Creek Road adjoining the project site.
 - (a) *Impacts on Views from Marsh Creek Road West of Marsh Creek.* Along Marsh Creek Road west of Marsh Creek, existing foreground open space views would remain. Portions of the Golf Course Residential, North Hills, and North Village subareas would be visible in distant views.
 - (b) *Impacts on Views from Marsh Creek Road-Camino Diablo East of Marsh Creek to Walnut Boulevard.* The greatest visual impact from the project would be experienced along the portion of the corridor east of Marsh Creek to Walnut Boulevard. Substantial areas of single- and multi-family housing in the East Village and East Hills subareas (residential Planning Areas 52, 59, 60, and 61), as well as the neighborhood park Planning Area 56 and elementary school Planning Area 57 in the East Village, could be visible in close range along this portion of the corridor. This roadway segment would include prominent foreground views of hillside development on the roadside knoll in Planning Area 61, and could include single-family residential development at the high point of a ridgeline in Planning Area 52.
- r Intermediate views could consist of relatively large areas of residential, commercial, public facilities, and neighborhood park development in the East Village subarea (Planning Areas 39, 42-51, 53, 55, 58). Relatively small portions of the SR 4 Bypass and the proposed project major thoroughfare would also be visible in intermediate views.

In distant views, moderate to large portions of the community college and business park (Planning Areas 37 and 38) in the East Creekside subarea would be visible, although sound walls and landscaping associated with the SR 4 Bypass may block some views of this subarea. Smaller expanses of residential development in the West Creekside subarea (Planning Areas 33 and 36), North Village subarea (Planning Areas 23 and 27), North Hills subarea (Planning Area 30) and Golf Course Residential subarea (Planning Area 31) would also be visible.

(c) *Impacts on Views from Camino Diablo West of Walnut Boulevard.* As shown on photograph 9, the Camino Diablo view corridor broadens approximately one half mile west of Walnut Boulevard (Old Vasco Road) to include expansive, northerly views of the onsite apple orchard in the foreground and the east-sloping hillsides of the eastern portion of the site in the background. Figure 65 illustrates the portions of the project that would be visible looking northeast from Camino Diablo at a point approximately one-and-a-half miles west of Walnut Boulevard. As shown in the figure, moderate expanses of low density multi-family residential development in Planning Area 61 in the East Hills subarea would be visible at close range, and small areas of medium density single-family housing in Planning Area 52 would be visible in intermediate views. Generally moderate to large expanses of residential, middle school, and neighborhood park development in the North Village and North Hills subareas (Planning Areas 11, 16, 18-20, and 29) could be visible in distant views from this location. These distant views could also include single-family residential development on a ridgeline in Planning Area 11. A small portion of the proposed project major thoroughfare would also be visible in a distant view from this location.

Mitigation V-4: Eliminate urban development in Planning Area 61, and include this area within the proposed *Open Space* designation. Amend the *Cowell Ranch P-1 Planned Unit District Development Standards* proposed by the applicant to (1) require special landscape treatment along those segments of Marsh Creek Road with project development area frontages, designed to retain a rural or semi-rural landscape character; and (2) include additional hillside development standards that promote preservation of significant land forms or hilltops, reduction in development intensity, grading limitations on steep slopes, contour grading, revegetation, and sensitive landscaping. Impose these hillside development standards on a case-by-case basis when reviewing future development applications involving Planning Areas 11, 16, 18-20, 23, 27, 29-31, 33, 36, 37-39, 42-50, 51-53, and 55-60, with consideration to views from Camino Diablo/Marsh Creek Road. Require special setbacks and landscape treatment along Camino Diablo. While implementation of this measure would help to substantially reduce the project's impact on views from Camino Diablo/Marsh Creek Road, the project alteration of the existing rural character of this County-designated "scenic route" would remain a **significant, unavoidable impact** of the project.

Future development applications for the East Village subarea should include a detailed implementation plan for special landscape treatment of the East Village frontage along

Camino Diablo. This landscape treatment should include a substantial setback, and agricultural-type planting patterns such as tree windrows, street trees planted at irregular intervals, and tree groves. These planting treatments should be introduced at the beginning of

project Phase I (2000-2010) so that the plants can mature and serve as an effective screen before buildout of the East Village phase is completed.

Impact V-5: Views from Walnut Boulevard/Vasco Road Corridor. Large expanses of proposed development in the East Creekside and East Village subareas would be visible at close range along this County-designated "scenic route." Portions of the North Village, West Creekside, East Village, and East Hills subareas would be visible in intermediate views, and portions of the North Hills and North Village subareas would be visible in distant views. Large expanses of the SR 4 Bypass and the proposed project major thoroughfare would be visible in close, intermediate, and distant views. Intermediate and distant views could also include single-family residential development on ridgelines in Planning Areas 11, 30, and 52. These changes would substantially and negatively alter the rural character and detract from existing views to the west of orchard, rangelands, hillsides, and ridgelines, and would represent a **significant impact** (see Criteria #1-3 under "3. Significance Criteria" above).

(a) *Views of Project from Walnut Boulevard/Vasco Road.* As shown by photograph 11, Walnut Boulevard/Vasco Road north of Camino Diablo, a County-designated "scenic route," includes foreground views of the roadside apple orchard in the eastern portion of the site. The upper, east-sloping hillsides of the eastern portion of the site are also visible above the roadside apple orchard from the approximately 1.2-mile segment of Vasco Road between Camino Diablo and Marsh Creek Road. Project development would replace the apple orchard in the foreground with urban development in the East Village and East Creekside subareas, and a portion of the east-sloping hillsides in the background in the East Hills and West Creekside subareas would be developed. The proposed SR 4 Bypass would block some views of the West Creekside subareas from Walnut Boulevard; the extent of this new blockage would depend on roadway, sound wall, and landscaping heights associated with the Bypass.

- r Figure 66 illustrates portions of the project that could potentially be visible looking generally west from the segment of Walnut Boulevard/Vasco Road that adjoins the project site. Close range views would consist of large expanses of urban development, including single- and multi-family housing, commercial uses, parks, and public facilities (potentially Planning Areas 39, 43-50, 53-58, and 60), in the East Village subarea, and business park and public facility (community college) development (Planning Areas 37 and 38) in the East Creekside subarea.

- Intermediate views would consist of generally large expanses of commercial, park, and multi-family residential development (Planning Areas 21-28) in the North Village subarea; multi-family housing (potentially Planning Areas 33, 34, and 36) in the West Creekside subarea; single- and multi-family housing (Planning Areas 40-42) in the East Village subarea; and single-family housing (Planning Areas 51 and 52) in the East Hills subarea. These intermediate views could also include medium density single-family development on the high point of a ridgeline in Planning Area 52.

r Distant views would consist of generally large expanses of single- and multi-family housing, the middle school, and the neighborhood park (potentially Planning Areas 3, 5-12, 16-18, 29, and 30) in the North Hills subarea; and multi-family residential and public facilities uses (Planning Areas 19 and 20) in the North Village subarea. These distant views could also include single-family residential development on a ridgeline in Planning Area 11, and on the high point of a ridgeline in Planning Area 30.

Relatively large expanses of the SR 4 Bypass and the proposed project thoroughfare would be visible in close, intermediate, and distant views from the Walnut Boulevard/Vasco Road corridor.

(b) Proposed Design Standards for Walnut Boulevard/Vasco Road. The Cowell Ranch P-1 Planned Unit District Development Standards proposed by the applicant include development/design standards for the onsite business park and adjacent Walnut Boulevard/Vasco Road frontage. The design standards for the business park include the following:¹

- *The lighting character should avoid spilling over into adjacent uses.*
- *Where adjacent to open space areas, informal planting from natural areas should be extended into new areas to create a comfortable transition.*
- *No access or frontage along Walnut Avenue.* (Note: The project proposes a collector road connection to Walnut Boulevard. This standard would prohibit driveway access off Walnut Boulevard for individual parcels.)
- *Special landscape treatment along Walnut Avenue.*
- *Monumentation at business park entry at Walnut Blvd.*

The following design standards are also proposed for the vehicular entry to the business park, which is identified as a "secondary community entry":²

- *Scored concrete paving provided across streets.*
- *Low entry signage wall using a fence or wall to identify the center.*
- *Special lighting to uplight trees and sign walls.*
- *Small flowering trees.*
- *Flowering evergreen shrubs, perennial(s), vines and groundcovers to provide structure and seasonal interest.*

¹Cowell Ranch Project, *Cowell Ranch P-1 Unit District Development Standards*, March 25, 1996, section 4.0 (Development/Design Standards), subsection 4.3 (Business Park), page 29.

²Cowell Ranch Project, *Cowell Ranch P-1 Unit District Development Standards*, March 25, 1996, section 5.0 (Urban Design Elements), subsection 5.1.2 (Secondary Entries), page 38.

- *Sidewalk layout integrated with the entry design.*

In addition, the following design standards are proposed for the intersection of the proposed project major thoroughfare and Walnut Boulevard/Vasco Road, which is identified as a "primary community entry":¹

- *Triangular landscaped area on each corner of the intersection.*
- *Direct pedestrian connection between adjacent land uses.*
- *Intersection and pedestrian crosswalks highlighted with enhanced paving.*
- *Low thematic wall terminating in low monuments, or pedestrian portals.*
- *Smooth simple planes of lawn with perennial and flower shrub accents.*
- *Accent lighting to distinguish entry area.*
- *Sight lines should be considered when locating planting and feature elements.*

Mitigation V-5: Amend the *Cowell Ranch P-1 Planned Unit District Development Standards* proposed by the applicant to (1) require special landscape treatment along those segments of Walnut Boulevard and Vasco Road with project development area frontages, designed to retain a rural or semi-rural landscape character; and (2) include hillside development standards that promote preservation of significant land forms or hilltops, reduction in development intensity, grading limitations on steep slopes, contour grading, revegetation, and sensitive landscaping. Impose these hillside development standards on a case-by-case basis when reviewing future development applications involving Planning Areas 3, 5-12, 16-30, 33, 34, 36-39, 40, 42-58, and 60, with consideration to views from Walnut Boulevard/Vasco Road. While these measures would help to substantially reduce the project's impact on views from Walnut Boulevard/Vasco Road, the basic alteration of the existing rural character of this County-designated "scenic route" would remain a ***significant, unavoidable impact*** of the project.

North of the project site, Walnut Boulevard extends through the *Agricultural Core* area designated by the County and City of Brentwood general plans before entering the City of Brentwood. South of the project site, Vasco Road passes through an extensive area designated by the Contra Costa County General Plan as *Agricultural Lands*. The project-related urban development would interrupt the predominantly rural and agricultural landscape along this corridor. While *Mitigation V-5* and the design measures proposed by the applicant would assist in softening the visual impact of the urban uses, this impact could not be mitigated to a less-than-significant level.

¹Cowell Ranch Project, *Cowell Ranch P-1 Unit District Development Standards*, March 25, 1996, section 5.0 (Urban Design Elements), subsection 5.1.1 (Primary Community Entries), page 36.

Impact V-6: Views from Marsh Creek Road (North-South). Large expanses of the North Village subarea would be visible at close range from this County-designated "scenic route." In intermediate and distant views, portions of the North Hills and Golf Course Residential subareas would be visible, possibly including residential development on significant ridgelines in Planning Areas 3, 11, 30, 32, and 52, and on a significant knoll and hillside in Planning Area 61. Large portions of the SR 4 Bypass and the proposed project major thoroughfare would be visible in close and intermediate views. These changes would substantially and negatively alter the rural character and detract from existing views of the reservoir and surrounding rangelands, hillsides, and ridges, and would represent a **significant impact** (see Criteria #1-3 under "3. Significance Criteria" above).

- r Figure 67 illustrates areas of the project that could potentially be visible from Marsh Creek Road, a County-designated "scenic route." As discussed in section III, Project Description, the project proposes that Marsh Creek Road terminate immediately south of the North Village subarea, near the Marsh Creek Reservoir. This portion of the roadway would become the right-of-way for the Marsh Creek Trail. A trail head and parking area are proposed, with the exact location yet to be determined.

West of the roadway, large expanses of commercial, multi-family residential, park, and public facility uses (Planning Areas 19-29) in the North Village subarea would dominate close-range views, except where blocked by existing tree cover along Marsh Creek. Intermediate views would consist of generally large expanses of single-family residential, elementary school, middle school, and neighborhood park development (Planning Areas 8-11, 16-18, and 30) in the North Hills subarea, and large expanses of low density multi-family housing and golf course development (Planning Areas 31 and 32) in the Golf Course Residential subarea. These intermediate views could also include single-family residential development on ridgelines in Planning Areas 11 and 30.

East of the roadway, foreground views would be dominated by single-family residential development in the East Hills subarea (Planning Areas 52 and 61), with other portions of the East Hills and East Village subareas visible in intermediate and distant views.

Distant views would consist of single-family residential development (Planning Areas 3, 5 and 7) in the North Hills subarea, and large expanses of low density multi-family housing and golf course development (Planning Area 32) in the Golf Course Residential subarea. These distant views could also include residential development at the high point of ridgelines in Planning Areas 3 and 32.

Large portions of the SR 4 Bypass and the proposed project major thoroughfare would also be visible in close and intermediate views from the Marsh Creek Road corridor.

Views of the John Marsh Home State Park site from Marsh Creek Road would not be obstructed by the project. The proposed community park areas surrounding the state park site would help to distinguish the site visually and protect its historic, rural character. However, Figure 67 illustrates that the proposed project major thoroughfare and Planning Areas 27-29, the proposed development areas closest to the John Marsh Home, would be visible from the state park site.

Mitigation V-6: As recommended in *Mitigation V-4*, eliminate urban development in Planning Area 61, and include this area within the proposed *Open Space* designation. Also, amend the *Cowell Ranch P-1 Planned Unit District Development Standards* proposed by the applicant to (1) require special landscape treatment along those segments of Marsh Creek Road with project development area frontages, designed to retain a rural or semi-rural landscape character; and (2) include hillside development standards that promote preservation of significant land forms or hilltops, reduction in development intensity, grading limitations on steep slopes, contour grading, revegetation, and sensitive landscaping. Impose these hillside development standards on a case-by-case basis when reviewing future development applications involving Planning Areas 1-3, 5-11, and 16-32, with consideration to views from Marsh Creek Road. While these measures would help to reduce the project's impact on views from Marsh Creek Road, the basic alteration of the existing rural character of this County-designated scenic route would remain a ***significant, unavoidable impact*** of the project.

Mitigation LU-7 in section IV.A, Land Use, also addresses mitigation of project impacts on the John Marsh Home, and includes a recommendation for landscape screening along the south side of the proposed major thoroughfare to block views of the project from the John Marsh Home State Park site, subject to State Park Department approval.

Impact V-7: Views from SR 4 Bypass. On the segment of the future SR 4 Bypass between Walnut Boulevard and Marsh Creek Road ("Modified County Alignment" alternative), large expanses of the East Village and West Creekside subareas to the west and the East Creekside subarea to the east would be visible at close range; intermediate views would consist of generally large expanses of development in the East Village and East Hills subareas, including single-family housing on a ridgeline in Planning Area 52. On the segment between Marsh Creek Road and the northern project site boundary, close range views would consist of large areas of urban development in the North Village and North Hills subareas, including high density single-family housing on a ridgeline in Planning Area 11; intermediate views would consist of moderate to large areas of development in the North Village and North Hills subareas (including single-family development at the high point of a ridgeline in Planning Area 30); and a small portion of the Golf Course Residential subarea would be visible in distant views. The project-proposed increase in urban development along this corridor could substantially and negatively detract from views of croplands, rangelands, hillsides, and ridges, and would represent a ***potentially significant project and cumulative visual impact*** (see Criteria #1-3 under "3. Significance Criteria" above).

The Contra Costa County General Plan designates the future SR 4 Bypass as a "scenic expressway," and the City of Brentwood designates the segment of the route north of Walnut Boulevard as a "gateway route" into the Brentwood community. The existing view along this segment of the future roadway alignment, which passes through the project site, is rural in character, and includes agricultural uses, rolling hills, and broad rangeland. The project, in conjunction with existing and proposed surrounding developments (e.g., Blackhawk-Nunn, Back Nine, Spanos), would change the future visual character of the view along this "gateway" segment of the Bypass from exclusively agricultural and pastoral to a primarily urban landscape.

r Figure 68 generally illustrates those areas of the project site that could potentially be visible
r from the future SR 4 Bypass. This simulation is a general depiction of visible areas. The
r depiction assumes grade-separated interchange configurations at Marsh Creek Road and
r Walnut Boulevard (see Figure 6), which would elevate the roadway surface to roughly 175 and
r 225 feet, respectively. Factors such as the final roadway elevations, sound wall locations, and
landscaping eventually approved for the Bypass may affect visibility of the project in some
locations.

The portion of the route between Walnut Boulevard and Marsh Creek Road would have dual frontages on, and extensive views of, the East Village and West Creekside subareas to the west and the East Creekside business park and community college to the east. These close-range views would consist of large expanses of multi-family residential and neighborhood park development in the West Creekside subarea (Planning Areas 33-36); large expanses of commercial, residential, public facility, and park development in the East Village subarea (Planning Areas 39, 40, and 42-50); and large expanses of business park and community

college uses in the East Creekside subarea (Planning Areas 37 and 38). Intermediate views looking west/southwest from this segment of the SR 4 Bypass would consist of generally large expanses of single- and multi-family residential, elementary school, and neighborhood park

development in the East Village and East Hills subareas (Planning Areas 51-60), including possible single-family housing on a ridgeline in Planning Area 52. Large expanses of the proposed project major thoroughfare would also be visible in close and intermediate views from this portion of the SR 4 Bypass.

From the segment of the future SR 4 Bypass between Marsh Creek Road and the northern project site boundary, views west/southwest into the project site would be dominated by urban development in the North Village and North Hills subareas. These close-range views could consist of large expanses of multi-family housing, commercial, and community park uses in the North Village subarea (potentially Planning Areas 21, 23, 24, 26, and 27); and generally large expanses of single- and multi-family residential development in the North Hills subarea (potentially Planning Areas 6-11), including high density single-family housing on a ridgeline in Planning Area 11. Intermediate views could consist of moderate to large expanses of single- and multi-family housing in the North Village and North Hills subareas (potentially Planning Areas 16, 17, and 28-30), possibly including single-family development at the high point of a ridgeline in Planning Area 30. A small portion of the multi-family residential development in the Golf Course Residential subarea (Planning Area 32) could be visible in distant views.

Mitigation V-7: Amend the *Cowell Ranch P-1 Planned Unit District Development Standards* proposed by the applicant to include hillside development standards that promote preservation of significant land forms or hilltops, reduction in development intensity, grading limitations on steep slopes, contour grading, revegetation, and sensitive landscaping. Impose these standards on a case-by-case basis when reviewing future development applications involving Planning Areas 6-11, 16, 17, 21, 23, 24, 26-30, 32, 33-40, and 42-60 with consideration to views from the SR 4 Bypass. Also amend the P-1 District Development Standards to specify and require special roadside setbacks and landscaping treatments in accordance with City of Brentwood-proposed landscape plans for the SR 4 Bypass corridor. These measures would mitigate the project-related and cumulative impact to a ***less-than-significant level***.

To reduce the project and cumulative impact of lost local rural character that would occur as a result of anticipated cumulative urban development along the SR 4 Bypass route between Marsh Creek Road and Antioch, the proposed project planned development zoning should include measures to implement Brentwood General Plan-proposed common landscape treatments along the SR 4 Bypass (Community Design Element, Policy 2.3.1). As a condition of future development approvals for the project site, the County should establish required landscape standards or designs, together with a fair-share participation requirement (e.g., participation in a Bypass Landscaping District that includes all future development fronting on the Bypass). The landscaping district approval would provide for implementation of a uniform treatment, with visual continuity and consistency, along the Brentwood sections of the Bypass.

Impact V-8: Views from Round Valley Regional Park. The majority of the development and associated grading in the Golf Course Residential and North Village subareas would be visible in distant views towards Brentwood from Round Valley Regional Park, along with smaller portions of the North Hills, West Creekside, East Creekside, East Village, and East Hills subareas. These views could include ridgeline development in the North Hills subarea (Planning Areas 11 and 12), and in the East Hills subarea (Planning Area 52); and development at the high point of a ridge in the Golf Course Residential subarea (Planning Area 32) and in the North Hills subarea (Planning Area 3). Such changes would substantially and negatively detract from the predominantly rural character of this existing view, altering existing views of onsite open rangeland, hillsides, and ridges. These additional changes would represent a **significant impact** (see Criteria #1-2 under "3. Significance Criteria" above).

- The 2,024-acre Round Valley Regional Park, owned by the East Bay Regional Park District (EBRPD), adjoins the southwestern corner of the project site (see Figure 16 in section IV.A, Land Use). The park is currently land-locked and not developed as a park or open to the public. In the future, however, the *Round Valley to Big Break Trail* (or "the Marsh Creek Trail") is planned to connect Round Valley Regional Park with Big Break at the mouth of Marsh Creek just north of Oakley. This trail would extend north from Round Valley Regional Park into the project site along the Marsh Creek channel.
- Figure 69 generally shows which portions of the project site could be visible from Round Valley Regional Park at a high point along the Marsh Creek Trail. All views of the project from this viewpoint would be in the distant range. The vast majority of the project site and background visible from Round Valley Regional Park as depicted in Figure 39 is comprised of natural, unbuilt features. In this context, the depiction also indicates that the majority of the multi-family housing and golf course development (Planning Areas 31 and 32) in the Golf Course Residential subarea could be visible from this vantage point, including development on a high point of the ridgeline in Planning Area 32. The majority of the multi-family residential, commercial, and park development (Planning Areas 19 and 21-28) in the North Village subarea would also be visible. Other portions of the project that would be visible in distant views include:
- small areas of residential and park development (potentially Planning Areas 3, 7, 8, 10-12, 16, and 30) in the North Hills subarea, including possible ridgeline development in Planning Areas 11 and 12 and possible development at the high point of a ridge in Planning Area 3;
 - a large expanse of multi-family residential development (Planning Area 33) in the West Creekside subarea;
 - a moderate-sized expanse of business park development (Planning Area 38) in the East Creekside subarea;

- r
- small areas of residential development (potentially Planning Areas 39, 41, and 42) in the East Village subarea; and
 - large expanses of residential development in the East Hills subarea (Planning Areas 52 and 61), including ridgeline development in Planning Area 52.

r The substantial amount of grading proposed within these visible development areas would
r contribute to adverse visual impacts on views from Round Valley Regional Park (cut and fill
r thicknesses of up to 70 and 55 feet, respectively--see Figures 42 and 43--are proposed in
r these visible portions of the site).

The future SR 4 Bypass and proposed project major thoroughfare would also be visible in distant views from this location.

Mitigation V-8: Amend the *Cowell Ranch P-1 Planned Unit District Development Standards* proposed by the applicant to include hillside development standards that promote preservation of significant land forms or hilltops, reduction in development intensity, grading limitations on steep slopes, contour grading, revegetation, and sensitive landscaping. Impose these standards on a case-by-case basis when reviewing future development applications involving Planning Areas 3, 7, 8, 10-12, 16, 19, 21-28, 30-33, 38, 39, 41, 42, 52, and 61, with consideration to views from Round Valley Regional Park. While these measures would help to reduce the project's impact on views from Round Valley Regional Park, the basic alteration of the existing rural character of the project site as viewed from the regional park would remain a **significant, unavoidable impact** of the project.

See *Mitigation V-2* for discussion of recommended hillside development standards.

r **Impact V-9: Views from Morgan Territory Regional Preserve.** The majority of the development and grading in the North Village subarea would be visible in distant views, towards Brentwood from the Morgan Territory Regional Preserve, along with smaller portions of the Golf Course Residential, North Hills, West Creekside, East Creekside, East Village, and East Hills subareas. These views would include ridgeline development in the North Hills subarea (Planning Areas 11 and 30), and development at the high point of a ridge in the East Hills subarea (Planning Area 52). These changes would substantially and negatively detract from the predominantly rural character of this existing view, altering existing views of onsite open rangeland, hillsides, and ridges. These additional changes would represent a **significant impact** (see Criteria #1-2 under "3. Significance Criteria" above).

The 3,377-acre Morgan Territory Regional Preserve, owned by the East Bay Regional Park District (EBRPD), is located approximately three miles southwest of the project site and immediately southwest of Round Valley Regional Park (see Figure 16 in section IV.A, Land Use). The *Round Valley to Big Break Trail* (or "the Marsh Creek Trail") is ultimately planned to extend from the preserve through Round Valley Regional Park and the project site to Big Break at the mouth of Marsh Creek just north of Oakley.

r Figure 70 shows portions of the project that would be visible from Morgan Territory Regional Preserve along the Marsh Creek Trail. All views of the project from this viewpoint would be in

r the distant range. The vast majority of the project site and background visible from open
r vantage points in the Morgan Territory Regional Preserve would be comprised of natural,
r unbuilt features. In this context, the majority of the multi-family residential, commercial, and
park development (Planning Areas 19 and 21-28) in the North Village

- r subarea would also be visible. Other portions of the project that could be visible in distant views include:
- relatively large areas of multi-family residential and golf course development (Planning Areas 31 and 32) in the Golf Course Residential subarea;
 - r ▪ moderate-sized areas of residential and park development (potentially Planning Areas 3, 7, 8, 10, 11, 12, 16, and 30) in the North Hills subarea, including possible single-family housing on ridgelines in Planning Areas 11 and 30;
 - a large expanse of multi-family residential development (Planning Area 33) in the West Creekside subarea;
 - a large expanse of business park development (Planning Area 38) and the proposed detention basin in the East Creekside subarea;
 - r ▪ relatively small areas of residential development (potentially Planning Areas 39, 41, and 42) in the East Village subarea; and
 - large expanses of residential development in the East Hills subarea (Planning Areas 52 and 61), including development on the high point of a ridge in Planning Area 52.
- r The substantial amount of grading proposed within these visible development area would
r contribute to adverse visual impacts on views from Morgan Territory Regional Preserve (cut
r and fill thicknesses of up to 83 and 55 feet, respectively, are proposed within these visible
r areas).

The future SR 4 Bypass and proposed project major thoroughfare would also be visible in distant views from this location.

Mitigation V-9: Eliminate development in Planning Area 61, as recommended in *Mitigation V-4*. Amend the *Cowell Ranch P-1 Planned Unit District Development Standards* proposed by the applicant to include hillside development standards that promote preservation of significant land forms or hilltops, reduction in development intensity, grading limitations on steep slopes, contour grading, revegetation, and sensitive landscaping. Impose these standards on a case-by-case basis when reviewing future development applications involving Planning Areas 3, 7, 8, 10, 11, 12, 16, 19, 21-28, 30-33, 38, 39, 41, 42, and 52, with consideration to views from Morgan Territory Regional Preserve. While these measures would help to reduce the project's impact on views from Morgan Territory Regional Preserve, the basic alteration of the existing rural character of the project site as viewed from the regional preserve would remain a **significant, unavoidable impact** of the project.

See *Mitigation V-2* for discussion of recommended hillside development standards.

c. Onsite Visual Impacts

Impact V-10: Visual Impact on Creeks. Urban development adjacent to onsite streams, including the existing Marsh Creek riparian zone, has the potential to alter the natural appearance of these drainages and degrade their visual quality. This would represent a ***potentially significant impact*** (see Criterion #2 under "3. Significance Criteria" above).

Project impacts on onsite topographic features of visual significance, including significant hilltops on ridge crests, are described under "b. Impacts on Offsite Viewpoints" above.

Mitigation V-10: Require the project applicant to prepare special landscape guidelines for onsite creek corridors that emphasize protection and enhancement of natural, riparian scenic features along the channel. This measure would reduce the impact to a ***less-than-significant level***.

The landscaping plan for creek corridors shall be consistent with mitigations recommended in sections IV.E, Drainage, Flood Control, and Water Quality, and IV.G, Biological Resources, of this EIR. The city of Brentwood, with concurrence from the East Bay Regional Parks District and Contra Costa County Flood Control and Water Conservation District, has adopted a *Creek Trails and Revegetation Master Plan*. Use of the standards and criteria within this approved document will assist in providing uniform treatment and protection for all creeks within and adjacent to Brentwood.

Impact on Onsite Segment of Marsh Creek Trail. The proposed route of the EBRPD-planned *Round Valley to Big Break Trail* will include a mix of rural and urban segments. The proposed project segment of the route would be aligned through project-designated open space areas, parks, and the Marsh Creek corridor. Provided that the trail segment through the project was constructed to EBRPD standards, no adverse visual impact would be anticipated.

Mitigation for Marsh Creek Trail. No significant impact has been identified, provided that the trail design fully complies with EBRPD trail design standards; no additional mitigation is required.

Impact V-11: Views of Electrical Transmission Lines. Three existing onsite PG&E high-voltage electrical transmission lines traverse the project site in or adjacent to areas proposed for single- and multi-family residential and community park uses, creating the potential for unattractive and distracting views of the transmission lines from project-proposed development areas. This represents a **significant impact** (see Criterion #2 under "3. Significance Criteria" above).

The three onsite PG&E electrical transmission lines would pass through, tangent to, or within 200 feet of the following Planning Areas (see Figure M-1 for location of easements):

Easement A		Easement B		Easement C	
Planning Area	Land Use	Planning Area	Land Use	Planning Area	Land Use
21	PR	2	SM	2	SM
23	MH	30	SL	4	SM
35	MH	52	SM	31	ML
36	ML			32	ML
51	SH				
52	SM				
60	SH				

PG&E easement provisions require that the area within transmission line easements be kept free of residential structures and other permanent physical obstructions to maintenance access; landscaping and fencing are acceptable. Beyond these easement requirements, PG&E has not adopted any additional guidelines or criteria with respect to residential setbacks from transmission lines. However, the quality and livability of these adjacent and nearby Planning Areas would be substantially diminished by views of these lines and associated towers. As indicated by the listing above, Easement A would present the most potential visual conflicts.

(The issue of electrical and electromagnetic field (EMF) hazards which may be associated with these transmission lines is discussed in section IV.M, Public Health and Safety, of this EIR.)

Mitigation V-11: For all single-family lots and all multi-family units within 150 feet of the edge of one or more of the three onsite PG&E 230 kV transmission line easements, reduce the visual impact of the existing transmission towers and lines through incorporation in the project landscaping plan of strategic planting of screen vegetation. Similarly, strategic landscaping should also be used at other key onsite vantage points with views of these transmission lines and towers in order to reduce their adverse impact on the visual quality of the community (i.e., strategic streetside and median planting along affected segments of the key project travel corridors, strategic planting along affected community park areas, etc.). Although these measures would reduce the visual implications of the power lines, these adverse visual impacts could not be reduced to less-than-significant levels, given the height, prominence, and distracting nature of the existing tower lines. The visual effect of the transmission lines on the identified residential and community park areas would remain a ***significant, unavoidable impact***.

Impact V-12: PG&E Gas Terminal and Compressor Station. The project proposes multi-family residential uses in relatively close proximity to the existing PG&E Gas Terminal and Compressor Station, which is lighted after sunset with high luminaires. The effect of the resulting glare on residential uses represents a ***potentially significant impact*** (see Criteria #2 and #4 under "3. Significance Criteria" above).

The proposed development plan for the project (Figure 8 in section III, Project Description) indicates that low and medium density multi-family residential uses (Planning Areas 9 and 10) would be located near the existing PG&E Gas Terminal and Compressor Station. The low density multi-family residential area would be separated from the facility boundary by the proposed project major thoroughfare, and the medium density multi-family residential area would be separated from the facility by a community park. These separations may or may not be adequate to screen direct views of the facility from these development areas, and to block nighttime glare (direct views) and light intrusion from the array of high luminaires within the facility. If direct views and nighttime glare and light intrusion into these four development areas is not effectively prevented, this land use relationship would represent a potentially significant visual impact.

Mitigation V-12: Incorporate setback and landscaping requirements in the project for the area surrounding the PG&E Gas Terminal and Compressor Station which, to the County's satisfaction, are adequate to screen direct views of the station, to block direct views of the station luminaires or other exterior light sources, and to prevent direct light intrusion into residential and other sensitive areas from compression station exterior lighting. Adjustment of the Cowell Parkway alignment on the west side of the station may be necessary to provide adequate setbacks and landscaping; this should be determined through County review (or City of Brentwood review, if the project is annexed to the City) of precise development plans for this portion of the project. This measure would reduce the impact to a ***less-than-significant level***.

As illustrated on Figure 6 in section III, Project Description, the project proposes less than 100 feet of buffer area between the west side of the PG&E station and Cowell Parkway. Multi-family residential uses would adjoin the west side of Cowell Parkway. At the time that precise development plans are submitted for this portion of the project, the County (or City) should review the proposed buffer area to ensure that adequate setbacks and landscaping are provided for. Include PG&E in the setback and landscaping plan review process, and require the applicant to obtain PG&E written approval of the setback and landscaping plan.

r 2. RELEVANT ENVIRONMENTAL POLICIES AND GUIDELINES

The Contra Costa County General Plan contains the following policy pertaining to new projects and air quality:

- *To meet Federal Air Quality Standards for all air pollutants.* (Conservation Element, Goal 8-AA, page 8-76)
- *To continue to support federal, State and regional efforts to reduce air pollution in order to protect human and environmental health.* (Conservation Element, Goal 8-AB, page 8-76)
- *To restore air quality in the area to a more healthful level.* (Conservation Element, Goal 8-AC, page 8-76)
- *To reduce the percentage of Average Daily Traffic (ADT) trips occurring at peak hours.* (Conservation Element, Goal 8-AD, page 8-76)
- *Development and roadway improvements shall be phased to avoid congestion.* (Conservation Element, Policy 8-98, page 8-81)
- *The free flow of vehicular traffic shall be facilitated on major arterials.* (Conservation Element, Policy 8-99, page 8-81)
- *Vehicular emissions shall be reduced throughout the County.* (Conservation Element, Policy 8-100, page 8-81)
- *A safe, convenient and effective bicycle and trail system shall be created and maintained to encourage increased bicycle use and walking as alternatives to driving.* (Conservation Element, Policy 8-101, page 8-81)
- *A safe and convenient pedestrian system shall be created and maintained in order to encourage walking as an alternative to driving.* (Conservation Element, Policy 8-102, page 8-81)
- *When there is a finding that a proposed project might significantly affect air quality, appropriate mitigation measures shall be imposed.* (Conservation Element, Policy 8-103, page 8-81)
- *Proposed projects shall be reviewed for their potential to generate hazardous air pollutants.* (Conservation Element, Policy 8-104, page 8-81)
- *Land uses which are sensitive to air pollution shall be separated from sources of air pollution.* (Conservation Element, Policy 8-105, page 8-81)
- *Air quality planning efforts shall be coordinated with other local, regional and State agencies.* (Conservation Element, Policy 8-106, page 8-81)
- *New housing in infill and peripheral areas which are adjacent to existing residential development shall be encouraged.* (Conservation Element, Policy 8-107, page 8-81)

- r ■ Cover all trucks hauling soils, sand, and other loose materials or require all trucks to
- r maintain at least two feet of freeboard.

Because of the general west-to-east transport of pollutants that occurs in the project area, the effects of project-related emissions would primarily occur in the adjacent San Joaquin Valley Air Basin. Transport of pollutants from the Bay Area Air Basin to the San Joaquin air basin is an important contributor to problems in the San Joaquin Valley Air Basin.

r

Mitigation AQ-2: In addition to the measures already included in the project, require the applicant to incorporate energy conservation and Travel Demand Management measures into the project. These measures would not reduce project-related air emissions below BAAQMD thresholds, however, and therefore this impact would remain **significant and unavoidable**.

(a) *Air Quality Mitigations Incorporated Into Project.* The proposed development plan for Cowell Ranch includes the following plan components, strategies, and programs designed to reduce traffic and associated air quality impacts through land use planning:

- two mixed-use village centers providing neighborhood commercial uses close to residential areas;
- onsite employment-generating uses, including 698,000 square feet of community-serving commercial development and a 1.2 million-square-foot business park employment center, that would provide the opportunity for project residents to work onsite;
- higher-density residential and other uses in proximity to the village center commercial cores;
- a balance between jobs and housing that increases opportunities for non-auto travel and reduces long distance commuting;
- compact land use and mixed-land use strategies that place a large portion of project residences within walking and bicycling distance of commercial facilities, recreational facilities, employment centers, and schools;
- bikeways and a trail system along major roadways and through open space areas to connect residences to the commercial centers; and
- provisions for bus stops and transit facilities.

(b) *Additional Measures Recommended by This EIR.* The following additional mitigation measures would reduce project impacts on regional air quality:

- Implement the travel demand management (TDM) measures identified in **Mitigation T-1** of this EIR.

- Wire each housing unit to allow use of emerging electronic communication technology.
- Restrict the number of fireplaces in residences to one per household and/or require residential use of Environmental Protection Agency (EPA)-certified woodstoves, pellet stoves or fireplace inserts. EPA-certified fireplaces and fireplace inserts are 70 to 90 percent effective in reducing emissions from this source. Also encourage the use of natural gas fired fireplaces.
- Require outdoor outlets at residences to allow use of electrical lawn and landscape maintenance equipment.
- Make natural gas available in residential backyards to allow use of natural gas-fired barbecues.
- Provide electrical recharge outlets for electric cars in residential garages.

The measures listed above, combined with those included as part of the project, could reduce projected regional air quality impacts by a maximum of 10 to 20 percent. There is currently no practical way to reduce the project critical emissions by the over 90 percent increment that would be necessary to bring project impacts below BAAQMD significance thresholds for reactive organic gases (ROG), oxides of nitrogen (NO_x), and PM-10. Therefore, the project's impacts on regional air quality are considered *significant and unavoidable*.

Long-Term Local Carbon Monoxide Effects. The project would generate substantial onsite and offsite traffic volumes, increasing local levels of carbon monoxide. Existing and future worst-case concentrations are predicted to be below applicable ambient air quality standards, so this impact is considered ***less-than-significant*** (see Criterion #2 under "3. Significance Criteria" above).

To assess the magnitude of impact on local carbon monoxide levels, the CALINE-4 computer simulation model was used. The CALINE-4 model is recommended for use in the analysis of such mobile-source environmental impacts by the U.S. Environmental Protection Agency, the California Air Resources Board, and the Bay Area Air Quality Management District. The CALINE-4 computer simulation model was applied to seven selected intersections identified in section IV.C (Transportation) of this EIR as most affected by project traffic generation and having significant congestion. The CALINE-4 model was run under worst-case assumptions for traffic and meteorology. A detailed discussion of the methodology used in the CALINE-4 modeling is provided in Appendix I of this EIR.

The model results were used to predict the maximum one- and eight-hour concentrations, corresponding to the one- and eight-hour averaging times specified in the state and federal ambient air quality standards for carbon monoxide. Table 65 lists the results of the CALINE-4 analysis for the peak one-hour and eight-hour traffic periods in parts per million (PPM) for projected year 2010 and year 2026 cumulative development and traffic conditions without and

with the proposed project, based on traffic impact data from section IV.C (Transportation) of this EIR.

The predicted future one-hour concentration values in Table 65 are to be compared to the federal one-hour standard of 35 PPM and the state standard of 20 PPM. The predicted eight-hour concentration values in Table 65 are to be compared to the state and federal standard of nine PPM.

Table 65 indicates that the project would increase local carbon monoxide concentrations by up to 1.4 PPM for the one-hour averaging time and up to 0.9 PPM for the eight-hour averaging time, but overall levels would remain below the state and federal standards. The project impact on long-term local air quality is therefore considered *less-than-significant*.

Mitigation for Long-Term Local Carbon Monoxide Effects. No significant impacts have been identified; no mitigation is required. However, TDM, housing-jobs balance, and roadway and intersection improvements identified in section IV.C (Transportation) of this EIR would reduce traffic volumes and congestion, thereby reducing carbon monoxide concentrations.

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- Impacts from Adjacent Land Uses.** The project would place new multi-family housing, commercial, and park and recreation uses adjacent to an existing PG&E Gas Terminal and Compressor Station, which is a potential source of odors. Because of the sporadic nature of odors from this source and the proposed 200-foot separation between the facility and nearest proposed residential area, this impact is considered *less-than-significant* (see Criterion #3 under "3. Significance Criteria" above).
- r The existing PG&E Gas Terminal and Compressor Station, located adjacent to the northern boundary of the site (see Figure 5 in section III, Project Description), creates periodic planned and unplanned venting of odorized natural gas into the atmosphere. The project proposes low-density multi-family housing to the west, commercial uses to the south, and community parkland to the east of the facility. Under the currently proposed development plan (see Figure 8 in section III, Project Description), Cowell Parkway and adjoining strip of open space would provide an approximately 200-foot wide buffer between the PG&E facility and the proposed residential area.

Mitigation for Impacts from Adjacent Land Uses. No significant impacts have been identified; no mitigation is required.

L. NOISE

The following section addresses the project impacts related to environmental noise. The section includes a description of the existing noise setting at the Cowell Ranch site, a discussion of the fundamentals of environmental acoustics and relevant regulations, and a description of related project impacts (e.g., local noise impacts of project construction activities, impacts of project-generated traffic over the long-term on noise levels along sensitive local travel routes; impacts of noise from the existing PG&E Gas Terminal and Compressor Station; impacts on the project from traffic noise on the SR 4 Bypass and other future local roadways; and impacts of aircraft overflights from the East Contra Costa County Airport). The section also includes an identification of measures to mitigate identified significant noise impacts.

1. SETTING

a. Fundamentals of Acoustics

Noise is defined as unwanted sound. The effects of noise can range from interference with sleep, concentration, and communication, to physiological stress, and, at higher noise levels, to human hearing loss.

Sound levels are usually measured and expressed in decibels (dB), with 0 dB corresponding roughly to the threshold of hearing. Decibels and other related technical terms are defined in Table 66.

(1) Human Sensitivity to Noise. The method commonly used to quantify environmental noise involves measurement of all frequencies of sound, with an adjustment to reflect the fact that human hearing is less sensitive to low and high frequencies than to midrange frequencies. This measurement adjustment is called "A" weighting. A noise level so measured is called an A-weighted sound level (dBA).¹ Examples of typical A-weighted noise levels in the environment and industry are provided in Table 67.

Environmental noise fluctuates in intensity over time. Therefore, time-averaged noise level computations are typically used to quantify noise levels and determine impacts. The two average noise level descriptors that are most commonly used are L_{dn} and CNEL. L_{dn} , the day-

¹In practice, the level of a sound source is conveniently measured using a sound level meter that includes an electrical filter corresponding to the A-weighting curve.

night average noise level, is the 24-hour average, with a ten dBA "penalty" added for nighttime noise (10:00 PM to 7:00 AM) to account for the greater human sensitivity to noise during this period. CNEL, the community equivalent noise level, is similar to L_{dn} , but adds a five dBA penalty to evening noise (7:00 PM to 10:00 PM). One way of anticipating a person's subjective reaction to a new noise is to compare the new noise with the existing noise environment to which the person has become adapted, i.e., the so-called "ambient" noise level.

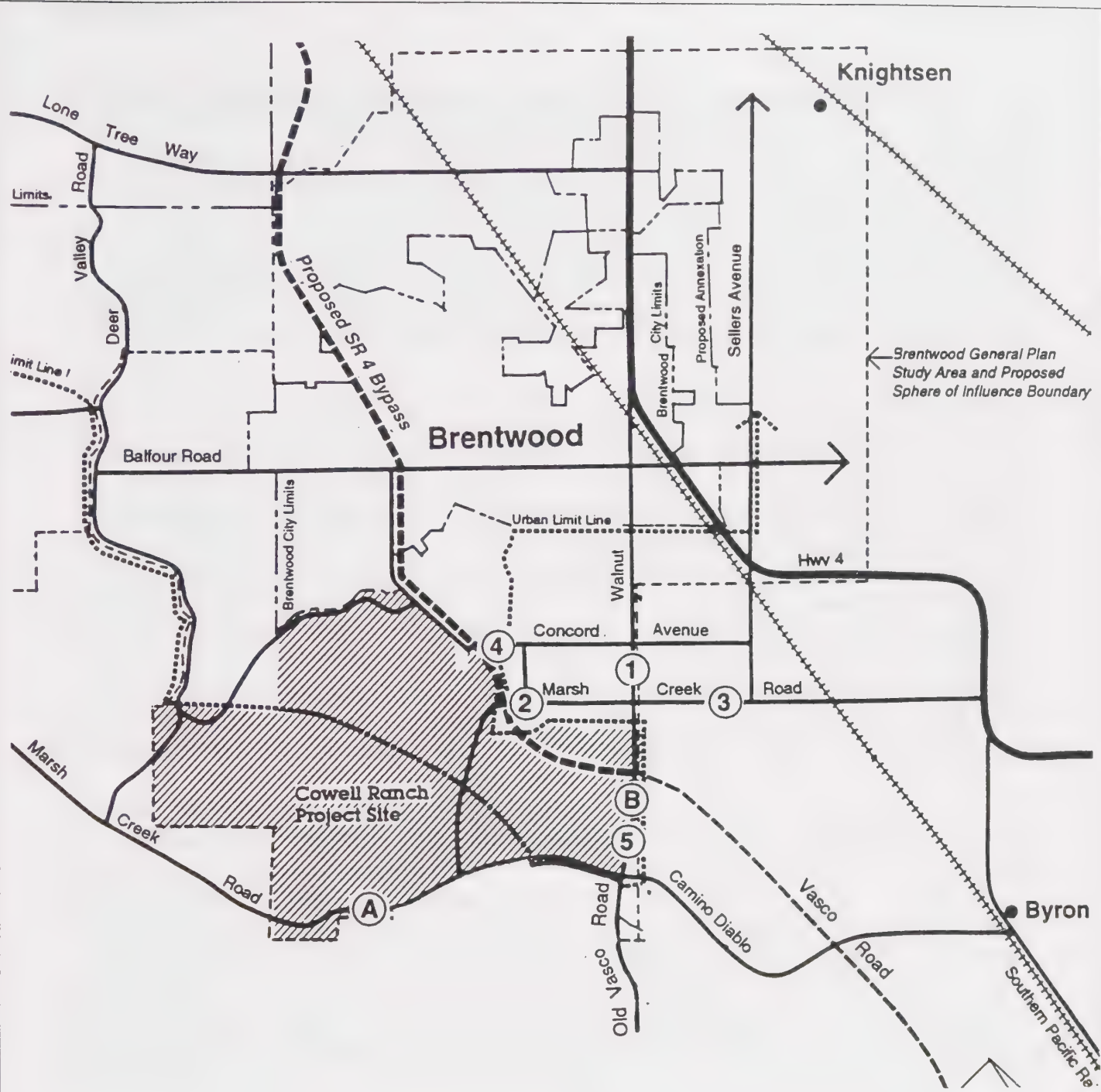
With regard to increases in A-weighted noise level, knowledge of the following relationships will be helpful in understanding this EIR chapter:

- Except in carefully controlled laboratory experiments, a change of one dBA cannot be perceived.
- Outside of the laboratory, a three dBA change is considered a just-perceivable difference.
- A change in noise level of at least five dBA is required before any noticeable change in community response would be expected.
- A ten dBA change is subjectively heard as approximately a doubling in loudness, and would almost certainly cause an adverse change in community response.

b. Existing Onsite Noise Environment

(1) Primary Existing Noise Sources. Currently there are no significant noise-producing activities on the project site. Existing sources of noise intrusion into the project site include traffic on the local street network (Camino Diablo, Marsh Creek Road, Vasco Road and Walnut Boulevard). Other adjacent and nearby noise sources include the PG&E Gas Terminal and Compressor Station located on Concord Avenue (illustrated on Figure 71), and occasional general aviation activity originating from the East Contra Costa County Airport located approximately five miles to the southeast (illustrated on Figures 74 and 75). Another potential source of noise intrusion into the site is the Kellogg Creek (Unimin) Sand Quarry, located near the northeastern corner of Walnut Boulevard and Camino Diablo. The quarry has valid land use permit to operate as needed. The Sand Hill Ranch Motorcross Park and related activities are located at the southeast corner of the intersection of Camino Diablo and Walnut.

(2) Existing Noise Levels. Noise measurements were conducted by the EIR noise consultant, Illingworth & Rodkin, at selected locations in and around Cowell Ranch between March 31 and April 3, 1994. The noise monitoring consisted of two continuous 96-hour (four-day) measurements, and five ten-minute measurements. Figure 71 illustrates the measurement locations. The long-term monitoring locations are shown as Locations A and B and the short-term monitoring locations are shown as Locations 1 through 5. The monitoring results are summarized below.



SOURCE: Illingworth & Rodkin, Inc./Acoustical Engineers, 1994

Cowell Ranch Project EIR Contra Costa County, CA



Wagstaff and Associates
 Urban and Environmental Planners

Figure 71
**NOISE MEASUREMENT
 LOCATIONS**

r (h) *PG&E Gas Terminal and Compressor Station*. Noise levels were monitored at the PG&E Gas Terminal and Compressor Station which, as illustrated on Figures 5 and 17, is located adjacent to the project site on Concord Avenue. The first noise monitoring took place on April 4, 1994 during normal facility operational conditions. All of the measurements were taken 20 feet from the PG&E fence surrounding the equipment. Mechanical equipment normally operating at the facility generated steady noise levels ranging between 49 dB and 60 dB around the perimeter of the facility. The majority of the mechanical equipment was operating inside buildings located at the southwestern area of the facility. Noise levels were highest along the southern and western fence lines of the plant. PG&E owns a large buffer area to the south.

Several times each year, the facility operation includes both scheduled and unscheduled "blowdowns" when natural gas is vented rapidly to the atmosphere, causing high noise levels. On April 11, 1996, noise measurements were made of several different kinds of periodic activities or "events" at the facility that can be expected to occasionally generate significant levels of intermittent noise. The measurements included a 10-inch pipeline blowdown, compressor unit blowdown, compressor emergency shutdown, two-inch relief valve blowdown, operation of the generator, operation of the purge air motors, operation of the finfans, and the operation of a gas-operated valve. Based on close-in measurements conducted by Wilson-Ihrig & Associates and noise measurements conducted on the Cowell Ranch site by Illingworth & Rodkin, Inc., four of these events were found to generate significant and measurable noise levels. These included the 10-inch pipeline blowdown, the compressor unit blowdown, the compressor unit emergency shutdown, and the two-inch relief valve blowdown.

The *10-inch pipeline blowdown* was determined to be the loudest source of intermittent facility noise, but occurrences are infrequent (once every two years or so). These are normally planned events with a duration of three to four hours. The measured test level was 124 dBA at a distance of 100 feet from the pipe. The highest test noise level monitored on the Cowell Ranch site taken at a distance of 1500 feet from the source was 96 dBA. Interpolation and extrapolation of the data indicates a level of over 100 dBA at the common property boundary.

Compressor unit blowdown events could occur as often as two times daily. The measured noise level 100 feet from the unit for this event was 84 dBA. The maximum A-weighted noise level was determined to be 70 dBA at a distance of 300 to 400 feet from the unit and 65 dBA at a distance of 600 to 700 feet from the facility.

Noise from the *compressor unit emergency shutdown* was essentially the same as from the *compressor unit blowdown* event.

The *two-inch relief valve blowdown* event was determined to be the most significant source of noise at the Cowell Ranch site when the two impact factors of occurrence frequency and noise level are considered together. There are three to five unscheduled occurrences per year, the duration of which is three to five minutes each. The measured test noise level was

r the facility. The County is planning an expansion of the airport to accommodate up to 250 aircraft based on the premises, and up to 210,000 aircraft operations annually.

Projected year 2025 noise exposure contours (CNEL) for the expanded East Costa County Airport have been determined for this EIR by P&D Aviation, and are illustrated on Figure 74.¹ The mapped contours indicate that the aircraft operation CNEL 65 noise contour will be contained almost entirely within airport property. Noise levels of 60 CNEL and 55 CNEL will be generated within geographic areas beyond the airport property, but would not be anticipated to extend to Cowell Ranch. Single event level (SEL) noise exposure contours were also projected for the airport for a single operation for a theoretical composite corporate jet aircraft arriving and departing along the primary pathway that extends over Cowell Ranch. The 85 dB SEL departure noise contour for such an aircraft extends some seven miles beyond the airport and traverses a portion of Cowell Ranch as shown in Figure 75.²

(k) *Sand Hill Ranch Motorcross Park*. This motorcycle race track, located at the southeast corner of Camino Diablo and Walnut Boulevard, recently received County approval for continued use, with site plan modifications, on a permanent basis. Currently, motorcycle activity is permitted seven days a week, but limited to the hours of 8:00 AM to 7:00 PM or sundown, whichever comes first, except that the oval race track may be used on Fridays from 7:00 PM to 11:00 PM. Motorcycle racing is limited to Saturday and Sunday and holidays, except that no racing or motorcycle activity is permitted on Thanksgiving or Christmas. The noise of the motorcycle activity would be audible in the southeastern corner of the Cowell Ranch property.

r 2. RELEVANT ENVIRONMENTAL POLICIES AND GUIDELINES

a. Federal Noise Compatibility Standards

Federal Aviation Regulations (FAR)³ contain the Federal Aviation Administration (FAA) standard for land use compatibility in the environs of US airports. Noise exposure levels of L_{dn} 65 dB and above are considered incompatible with residential land uses, schools, and other public facilities. These land use compatibility standards recognize the prerogatives of local

¹This airport noise information is summarized from an independent technical study titled "Aircraft Noise Analysis, Cowell Ranch Project EIR", prepared for Contra Costa County and Wagstaff and Associates by P&D Aviation, December 22, 1993. The purpose of this assessment was to describe the potential for aircraft noise intrusion on proposed project residential, educational, and other noise-sensitive land uses.

²Ibid.

³Part 150 "Airport Noise Compatibility Planning."

4. IMPACTS AND MITIGATION MEASURES

The potentially significant noise issues associated with the proposed project are:

- the compatibility of the proposed land uses with the anticipated onsite noise environment;
- the extent to which project-generated traffic noise would adversely affect long-term noise levels in the area; and
- the extent to which construction activity would substantially increase noise levels in the area.

a. Project Compatibility with Future Noise Environment

(1) Project Exposure to Vehicular Traffic Noise. Future noise levels along existing and proposed roadways in the project area have been projected for years 2010 and 2026 based on projected traffic information included in section IV.C (Transportation) of this EIR, and through the use of a Caltrans-approved noise prediction model. The noise predictions include a projection of noise contour distances along key affected routes to L_{dn} noise levels of 60, 65, 70, 75, and 80 dB. All projections assume implementation of the SR 4 Bypass project.

To summarize the results of the analysis, Figure 76 illustrates the relationship between the proposed project development plan and the projected year 2026 60- L_{dn} noise contour for major future roadways. Figure 76 thereby illustrates the noise-sensitive uses that would be exposed to worst-case noise levels above an L_{dn} of 60 dB from traffic on the SR 4 Bypass, the proposed Cowell Parkway, Marsh Creek Road, Camino Diablo, and Walnut Boulevard. Setbacks have been created in many areas due to the CCWD pipeline right-of-way, community parks, commercial and public services.

SR 4 Bypass. The primary source of ground transportation noise affecting the site would be the proposed SR 4 Bypass. Noise-sensitive land uses adjacent to the SR-4 Bypass would include proposed residential development in Planning Areas 6, 7, 9 and 10 northwest of the PG&E Gas Terminal and Compressor Station, a community park in Planning Area 21, a community college in Planning Area 37, and additional residential development proposed in Planning Areas 39, 40, 44, 45, 46 and 49.

Other Travel Routes. Residential development is also proposed along Walnut Boulevard and Camino Diablo in Planning Areas 58, 59 and 60. In addition, noise-sensitive land uses would adjoin the proposed Cowell Parkway, the internal arterial which would roughly parallel the proposed State Route 4 Bypass through portions of the project. Residential development is proposed in Planning Area 10, 19, 27, 28, 29, 33, 35, 36, 41, 42, 50, 51, 53, 55 and 58. A middle school is proposed in Planning Area 18 and a community park in Planning Area 21. Onsite traffic noise impacts associated with these noise source/land use relationships are individually described below.

Mitigation N-2: Implement measures recommended under *Mitigation N-1* above. These measures would reduce the impact to a ***less-than-significant level***.

Impact N-3: SR 4 Bypass Traffic Noise Impacts on the Community College. Future noise levels would exceed an L_{dn} of 60 dB within approximately 680 feet of the center line of the SR 4 Bypass at the proposed community college site. Exposure of classrooms and other indoor and outdoor facilities to noise levels of 60 dB and above would constitute a ***potentially significant impact***, based on County and City of Brentwood standards (see Criteria #1-3 under "3. Significance Criteria" above).

Mitigation N-3: Implement measures recommended under *Mitigation N-1* above. These measures would reduce the impact to a ***less-than-significant level***.

- r (2) Impacts Due to PG&E Concord Avenue Gas Terminal and Compressor Station Noise.
r The existing PG&E Gas Terminal and Compressor Station on Concord Avenue is a major stationary noise source. Single-family residential uses are proposed to the west of the facility (Planning Area 10). The noise limits established by the City of Brentwood were used to assess the significance of potential noise impacts from the facility on adjacent land uses, since Contra Costa County does not have a quantitative noise policy for non-transportation noise sources. The City of Brentwood has established a performance standard that sets an hourly average noise level (L_{eq}) of 50 dB during daytime and 45 dB during nighttime as the upper noise limit at the property line of an adjacent noise-sensitive land use. The performance standard also establishes maximum intermittent noise level (L_{max}) limits of 70 dB during daytime and 65 during nighttime hours.
-

- r **Impact N-4: Noise from Normal Operation of PG&E Facility.** A portion of the
r proposed single-family residential development in Planning Area 10 would be exposed to average operational noise levels from normal operational events of the PG&E Gas Terminal and Compressor Station which exceed City of Brentwood-recommended limits. This effect would represent a ***potentially significant impact*** (see Criteria #1 and #3 under "3. Significance Criteria" above).

Figure 77 illustrates the 45- L_{eq} and 50- L_{eq} noise contours for normal operation of the facility. The 45 L_{eq} contour represents the more restrictive nighttime limit of the City of Brentwood performance standard.

Mitigation N-4: Require one or a combination of the following treatments to reduce noise to acceptable levels during the daytime and nighttime: (a) applicant cooperation with PG&E to secure funding for acoustical louvers, silencers, or equipment enclosures on the PG&E Gas Terminal and Compressor Station to provide an additional 5 dBA of noise reduction; (b) incorporation of noise control berms or barriers at the tops of onsite graded slopes close to project residences, in conjunction with the grading plan, to provide 5 dBA of attenuation for the nearest proposed residences; and/or (c) revision of the proposed site plan to provide an open space buffer or area containing less noise-sensitive land uses, such as maintenance facilities, parking lots, or recreational uses within 600 feet of the compressor building. One or a combination of these measures would reduce the impact to a ***less-than-significant level***.

Impact N-5: Noise from 10-Inch Pipeline Blowdown at the PG&E Facility. Maximum A-weighted noise levels from 10-inch pipeline blowdown events at the PG&E Gas Terminal and Compressor Station (which occur approximately once every two years) would exceed 100 dBA at the proposed single-family residential land uses in Planning Area 10. This is a ***potentially significant impact*** (see Criteria #1 and #3 under "3. Significance Criteria" above).

Mitigation N-5: Require disclosure of PG&E blowdown activities to prospective homebuyers in Planning Area 10. Noise from 10-inch pipeline blowdowns could be mitigated by PG&E by using a blowdown truck silencer, reducing the pipeline pressure prior to the blowdown, and notifying nearby residents that the event is planned. These measures would reduce the impact to a ***less-than-significant level***. Additional permanent mitigation measures for the 10-inch pipeline blowdown do not appear to be warranted since this is an infrequent occurrence and normally is a planned and scheduled event by PG&E.

Impact N-6: Noise from Compressor Unit Blowdown and Compressor Unit Emergency Shutdown at the PG&E Facility. The maximum A-weighted noise levels from a compressor unit blowdown at the PG&E Gas Terminal and Compressor Station are predicted to exceed the 70 dBA daytime limit and the 65 dBA nighttime limit at the proposed residential land uses in Planning Area 10. This effect would represent a ***potentially significant impact*** (see Criteria #1 and #3 under "3. Significance Criteria" above).

interior speech interference threshold of 65 dB; this threshold infers that, at indoor noise levels below 65 dB, speech may continue uninterrupted during the noise event. Allowing for an assumed noise level reduction (NLR) of 20 dB by single-family housing construction, an outdoor criterion of 85 dB (SEL) can be inferred. For purposes of this analysis, the outdoor criterion level of 85 dB (SEL) has been applied to determine the potential for residences and other noise-sensitive land uses to be subjected to indoor speech interference and intrusion.

Impact N-8: Aircraft Noise. If the planned expansions to East Contra Costa County Airport operations take place, residential, commercial, park and recreation, and public service areas (including a 10-acre elementary school) in the East Village subarea would be exposed to intermittent noise levels in excess of 85 dB (SEL) from occasional single aircraft flyovers. This effect would represent a **potentially significant impact** (see Criteria #1 and #3 under "3. Significance Criteria" above).

- r Figure 79 illustrates the area of the project site that would be exposed to outdoor noise exceeding 85 dB (SEL) due to aircraft flyovers.

Mitigation N-8: Require (1) acoustical studies for affected buildings that identify design measures necessary to reduce indoor noise levels to 65 dB (SEL), and (2) disclosure of potential intermittent noise impacts from individual aircraft overflights to prospective buyers and renters in the affected area (i.e., within the 85 dB (SEL) contour area and within 1,000 feet of the contour line). These measures would mitigate the effects of East County Airport-related aircraft noise within the site to a **less-than-significant level**.

(a) *Acoustical Studies.* Require acoustical studies for future individual residential, commercial lodging, and school projects exposed to the projected excessive noise contours to ensure that all proposed new noise-sensitive land uses located within the projected 85 dB (SEL) noise contour for the East Contra Costa County Airport will be compatible with both California Noise Insulation Standards¹ and local noise standards.

Title 24, Part 2, of the California Code of Regulations specifies that proposed new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings within areas of potentially significant noise exposure are required to have an acoustical analysis showing that the structure attains a satisfactory interior noise level, nominally CNEL 45 dB (or, comparatively, 65 dB (SEL)).

¹State of California, Code of Regulations, Title 24, Part 2, Housing and Community Development, Chapter 1, "State Housing Law Regulations and Earthquake Protection Laws and Regulations -- Noise Insulation Standards," Subchapter 4, Section 28, as amended.

Impact N-11: Impacts from Kellogg Creek Sand Quarry. Residential development in Planning Areas 58 and 59 could be exposed to noise from future quarry operations that would exceed Contra Costa County and City of Brentwood standards. This is a **potentially significant impact** (see Criteria #1 and #3 under "3. Significance Criteria" above).

The Kellogg Creek Sand Quarry, located at the northeast quadrant of the intersection of Walnut Boulevard and Camino Diablo, has an existing land use permit that would allow it to operate, as needed, to meet market demands for sand. Although the quarry is not presently operating on a regular basis, the potential for a continuous mode of operation in some future time exists. Material extracted from the quarry would be transferred to the nearby Byron Sand Plant for processing.

Although quarrying would primarily take place in an open pit and noise generated by quarry activities would be mostly contained within the pit area, it is possible that excavation and transport equipment would operate for an extended period as close as approximately 1,000 feet to the eastern edge of the project along Walnut Boulevard. As a result, quarry noise on this portion of the project site (Planning Areas 58 and 59) could potentially reach an average noise level of 63 to 66 dB and a 24-hour average noise level (L_{dn}) between 61 and 64 dB. The 24-hour average noise level assumes that the quarry would only operate during daytime hours (7:00 AM to 10:00 PM). Maximum noise levels from quarry equipment would also reach as high as 66 to 68 dB on this portion of the project site.¹ Such noise levels would exceed the County's 24-hour average noise limit of an L_{dn} of 60 dB, which is applicable to residential (and school) land uses, and would also be in violation of the City of Brentwood's noise performance standards limits (both maximum and average noise levels).

Mitigation N-11: At the time of development approval for Planning Areas 58 and 59, assess the likelihood of continued quarry operations and require mitigation measures as necessary to achieve a maximum average outdoor noise level of an L_{dn} of 60 dB.

Appropriate mitigation would include increased setbacks between the project development and the quarry; restrictions on quarry hours of operation, haul routes, and haul route hours; a systematic quarrying plan; and/or accumulation of the spoils material on the perimeter of the quarry to form a berm. In addition, require a disclosure statement in the sale or lease of homes and other noise-sensitive property near the quarry, notifying future occupants that the property is located in an area subject to potentially high noise levels. These measures would reduce the impact to a **less-than-significant level**.

¹The noise levels projected for quarrying activities are based on calculations from literature data and previous studies of similar projects conducted by Illingworth & Rodkin, Inc.

M. PUBLIC HEALTH AND SAFETY

This section describes (1) existing conditions onsite or in the vicinity that may pose project-related risks to public health and safety, including electrical transmission lines, underground natural gas lines, underground petroleum pipelines, the adjacent PG&E gas terminal and compressor station, potential mercury contamination in Marsh Creek Reservoir, and potential soil contamination from past and present agricultural uses, and from future onsite golf course management activities; (2) environmental goals and policies related to these public health and safety concerns; (3) relevant impact significance criteria; (4) the impacts of these factors on the health and safety of the project occupants; and (5) mitigation measures warranted to reduce or eliminate identified significant impacts.

1. ELECTRIC AND MAGNETIC FIELDS

a. Setting

The location of urban development near high voltage electrical transmission lines raises concerns regarding possible health and safety risks due to electromagnetic emanations from the lines. To address these concerns, Enertech Consultants, electric and magnetic field (EMF) consultants, have performed an independent assessment for this EIR of the power and frequency of electric and magnetic fields generated by the three Pacific Gas & Electric (PG&E) 230 kilovolt (kV) overhead transmission lines that cross the project site (see Appendix J). This analysis involved electric and magnetic field measurement at various locations along the 230 kV transmission corridors, and computer calculations of the electric and magnetic fields from the transmission lines crossing the property.

(1) Onsite Transmission Line Characteristics. As illustrated on Figure 80, three PG&E 230 kV electrical transmission lines traverse the site. These overhead lines are supported by lattice steel tower structures that are approximately 120 feet high and are typically spaced at 1,800-foot intervals. Two 230 kV circuits are suspended from each tower. The three transmission lines onsite are the Pittsburg-Tesla #1 and #2 230 kV Line, the Contra Costa-Newark #1 and #2 230 kV Line, and the Contra Costa-Tesla #1 and #2 230 kV Line.

The two westerly lines (the Pittsburg-Tesla and Contra Costa-Newark lines) are located within 100-foot-wide easements; the easterly line (Contra Costa-Tesla line) is within a 75-foot-wide easement. PG&E easement provisions prohibit the location of any structures or other permanent obstructions within these easements that would inhibit maintenance access to a transmission line or tower. Typical landscaping, parking areas, and fencing are generally

Electric field measurements taken near the edges of the transmission line easements ranged from about 0.08 kV/m to a maximum of about 0.4 kV/m. Electric field shielding existed at many of the selected measurement locations due to objects in the area of measurement. *Magnetic field* measurements taken near the edges of the transmission line easements ranged from about 0.3 mG to a maximum of about 7.0 mG. A comparison of these onsite measurements with the standards shown in Table 76 indicates that the measured electrical and magnetic field strengths are under the maximum standards and regulations of the seven states that have established limits on field strengths along transmission line rights-of-way.

In addition to the actual field measurements, computer calculations were performed to model existing onsite electric and magnetic field conditions. Calculated *electric field* values ranged from 0.4 kV/m to a maximum of 2.2 kV/m. These calculations do not take into account electric field shielding that could occur at various locations along the proposed line route.¹ Calculated *magnetic fields* for existing conditions ranged from about 3.5 mG to about 69.6 mG. These calculated electric and magnetic fields strengths are higher than those actually measured due to transmission line geometry assumptions, shielding effects, terrain variation, and other computer modeling assumptions that differ from actual conditions. The computer-calculated estimates are within the standards shown in Table 76 for some states, and exceed the standards established in others.

r **b. Relevant Environmental Policies and Guidelines**

There are currently no known federal, State of California Public Utilities Commission (PUC), Contra Costa County, or City of Brentwood regulations regarding setbacks from electric power lines to limit electric and magnetic field exposure. A few states have adopted electric field guidelines, and two states have established a magnetic field standard. These guidelines and standards are summarized in Table 76. The purpose of most of these current state guidelines and standards is to ensure that field levels from new power lines do not exceed field levels from existing lines, or to avoid the nuisance effects from the electric fields of larger transmission lines. In addition, the California PUC, PG&E, and the California Department of Education have adopted the following recommendations, requirements, and standards in response to electrical transmission line safety concerns:

(1) California PUC Recommendations. In response to public concern, the California Public Utilities Commission (PUC) initiated a process to provide more specific guidance regarding EMF exposure. On January 15, 1991, the PUC issued an Order Instituting Investigation "...to develop policies and procedures for addressing the potential health effects of electric and magnetic fields of utility facilities." The PUC stated that "...the scientific community has not reached consensus on the nature of any health impacts from contact with electric and magnetic fields," and, given the ubiquitous nature of magnetic fields, that "it is extremely

r ¹The assumptions used in the model are described in Appendix J of this EIR.

that such disclosures be included in the sales and rental materials to be signed by future project residents.

2. PG&E GAS TERMINAL AND COMPRESSOR STATION AND NATURAL GAS AND PETROLEUM PIPELINES

a. Setting

(1) PG&E Gas Terminal and Compressor Station. As shown on Figures 4 and 5 in EIR section III (Project Description), a PG&E gas terminal and compressor station is located on Concord Avenue surrounded on three sides by the project site. The facility acts as the central control for directing the flow of natural gas throughout central and northern California and provides compression to move gas north or south of the compression station. Although the compression station presents a potential for fire or explosion, no fires or explosions have occurred since the facility began operation in the mid-1950s. The facility is staffed 24 hours a day by PG&E operators who monitor the system and remotely control valves to allocate gas flows towards areas of high demand. As part of this procedure, the operators activate compressors to increase the pressure of the gas flowing from the terminal to the various service areas. PG&E representatives report that public complaints about the station to date have been limited to concerns expressed by residents to the north about the high intensity of the exterior nighttime lighting. PG&E addressed this problem by reducing the intensity of the lighting.¹ Such visual concerns, and other compatibility issues associated with this facility such as noise and vibration are discussed in EIR sections IV.K, Air Quality, and IV.L, Noise.

(2) Natural Gas Pipelines. As shown on Figure 80, the project site contains three PG&E underground natural gas pipelines. Two of these pipelines traverse the middle of the site and connect to the PG&E gas terminal and compressor station. These lines range from 20 to 36 inches in diameter. They are inspected biannually to identify any leaks or other associated problems. The pipelines are located within easements ranging from ten to 75 feet wide. PG&E imposes specific limitations on what can be placed within these easements. For example, structures, cross-fencing, ponds, or lakes are not permitted.²

(3) Petroleum Pipeline. As shown on Figure 80, a 30-foot-wide easement containing an active 18-inch, high-pressure petroleum pipeline, operated by Chevron, crosses the eastern

¹Ken Bezner, Supervisor, PG&E, personal communication, February 28, 1994; and Ben Campbell, Engineer, PG&E, personal communication, February 2, 1994.

²Chris Warner, Engineer, PG&E, personal communication, March 7, 1994.

section of the site near the Marsh Creek Road/Walnut Boulevard intersection, and continues north onsite paralleling Concord Avenue.¹

b. Relevant Environmental Policies and Guidelines

Pertinent Contra Costa County and City of Brentwood policies and guidelines that address public health and safety issues (relative to the PG&E gas terminal and compressor station and gas and petroleum lines on the project site) are summarized below.

(1) Contra Costa County General Plan Policies. The petroleum and natural gas pipelines that cross the project site are identified as hazardous land uses on the *Hazardous Land Use Map* of the Contra Costa County General Plan. In addition, the General Plan contains the following policies relative to the gas and petroleum facilities on the project site:

- *Industries which store and process hazardous materials shall provide a buffer zone between the installation and the property boundaries sufficient to protect public safety. The adequacy of the buffer zone shall be determined by the County Planning Agency.* (Safety Element, Policy 10-65, page 10-65)

(2) City of Brentwood General Plan Policies. The following Brentwood General Plan goals and policies relate to the public health and safety hazards of the gas and petroleum facilities on the project site:

- *Maintain Brentwood safe from risks associated with hazardous materials.* (Safety Element, Goal 2, page IV. 2-6)
- *Provide Information: Provide the public, industry, agriculture, and local government with the information need to take rational steps to minimize, recycle, treat, dispose and otherwise manage hazardous wastes in Brentwood.* (Safety Element, Policy 2.1.3, page IV. 2-6)

(3) State Department of Education Policies. State Department of Education guidelines for facility siting call for the avoidance of land with underground natural gas or petroleum pipelines. (See section IV.F, Public Facilities and Services, "Schools," for a more complete discussion of State school siting guidelines.)

c. Significance Criteria

Relative to the PG&E gas terminal and compressor station and the gas and gas and petroleum pipelines on the project site, the project would be considered in this EIR to have a *potentially significant health and safety impact* if it would:

¹G.N. Turner, Operations Technician, Chevron Pipeline Company, written communication, April 11, 1994.

- r (1) Not provide the minimum buffer around the PG&E gas terminal and compressor station necessary to protect public health and safety, as specified by Contra Costa County General Plan Policy 10-65.
- (2) Result in an unsafe risk associated with hazardous materials, as specified by Brentwood General Plan, *Safety Element* Goal 2.
- (3) Result in the construction of a school facility over an underground natural gas or petroleum pipeline, violating State Department of Education facility siting guidelines.

d. Impacts and Mitigation Measures

r **Impact PHS-2: PG&E Gas Terminal and Compressor Station Impacts.** If the project
r does not provide an adequate safety buffer between the existing PG&E gas terminal and
r compressor station and proposed adjacent and nearby commercial and residential land
uses, the explosion potential at that facility would pose a risk to project occupants,
representing a ***potentially significant impact*** (see Criterion #1 under "c. Significance
Criteria" above).

As shown on Figure 80, the project proposes development of a commercial office area (CO) immediately adjacent to the PG&E property, and multi-family low areas (ML--Planning Areas 4 and 10) nearby, separated from the facility by the proposed main north-south thoroughfare.

r Based on the incident-free history of the PG&E gas terminal and compressor station, the
potential for a facility-related fire or explosion is low. However, because there is the
potential for such hazards to occur, occupants of the proposed adjacent commercial and
nearby residential areas, and the adjacent community, could be exposed to the risk of fire
or explosion.¹

r As shown on Figure 80, the nearest proposed school site, the middle school (MS), is
located approximately 1,400 feet southwest of the PG&E gas terminal and compressor
station. This separation is expected to be sufficient to prevent exposure of middle school
students and staff to potential facility-related hazards.

¹Chris Warner, PG&E, written communication, March 24, 1994.

Mitigation PHS-2: Require a buffer around the PG&E gas terminal and compressor station to protect public health and safety in the event of a natural gas-related explosion. The size of the buffer should be negotiated through consultation with PG&E and reviewed and approved by the County to provide adequate protection from noise and safety impacts (see *Mitigation N-4*). Require disclosure of PG&E gas terminal and compressor station hazards to all commercial occupants and residents within 1,000 feet of the PG&E gas terminal and compressor station. These measures would reduce the impact to a ***less-than-significant level***.

Implement both of the following mitigation measures to reduce identified health and safety impacts to a less-than-significant level:

(a) *Buffers.* Provide fenced, publicly inaccessible buffers with berms to provide a topographical separation between the edge of the PG&E gas terminal and compressor station and the adjacent commercial use, vehicular thoroughfare, and any pedestrian facilities.¹ The size of the buffer should be negotiated through consultation with PG&E, taking into account safety as well as noise impact considerations (see *Mitigation N-4* in section IV.L, Noise).

(b) *Disclosure.* Provide disclosure statements regarding the existence of the PG&E gas terminal and compressor station and associated health and safety risk in the sales and rental materials for distribution among future project residents and commercial occupants located within 1,000 feet from the edge of the PG&E facility. The project development agreement shall stipulate that such disclosure statements be included with all sales and lease agreements involving residential and commercial properties within 1,000 feet of the PG&E gas terminal and compressor station.

Impact PHS-3: Natural Gas Pipeline Impacts. Natural gas pipeline easement #4 extends through the proposed middle school site (Planning Area #18) and could subject school occupants to hazards. This is a ***potentially significant impact*** (see Criterion #3 under "c. Significance Criteria" above).

As illustrated on Figure 80, the three onsite natural gas line easements cross or are adjacent to a number of project-designated urban development areas. The easternmost 75-foot natural gas pipeline easement #2 traverses or is adjacent to areas proposed for single family medium (SM), multi-family low (ML) and multi-family high (MH) residential use (Planning Areas 23, 33, 35, 52, and 61). The 15-foot-wide natural gas pipeline easement #3 traverses or is adjacent

¹PG&E recently constructed a similar compressor station in 1993 and provided a 100-acre buffer zone around it to protect the public.

to project-designated multi-family medium (MM), multi-family high (MH), public/semi-public (PS), commercial (CO) and park (PR) uses (Planning Areas 20, 23, 27, and 28). Natural gas

evaluation determined that exposure to mercury in onsite soils should not cause adverse effects to human health.¹

No indications of other types of potential contamination (fuels, industrial chemicals, etc.) of onsite soil from offsite sources were noted in the Levine Fricke report.

(3) Other Onsite Hazardous Conditions. As illustrated in Figure 58 in EIR section IV. H, Mineral Resources, and as discussed in detail in that section, the project site contains an abandoned sandstone mine. The former mine currently consists of open pits and underground tunnels within a Domengine Sandstone formation. Some of the underground tunnels have collapsed. According to the Harding Lawson Associates letter report, "Access [to the mine site] is easily afforded through a field and over a collapsed fence bordering the property." Furthermore, the report states that, "from debris left in the area, it is apparent that many people use both underground and surface workings for recreational purposes."²

r **b. Relevant Environmental Policies and Guidelines**

r Pertinent Contra Costa County and City of Brentwood policies and guidelines that address hazardous materials and conditions are summarized below.

(1) Contra Costa County General Plan Policies. In addition to the policies cited in subsection 2.b above, the Contra Costa County General Plan contains the following policy regarding hazardous materials:

- *Hazardous waste releases from both private companies and public agencies shall be identified and eliminated.* (Safety Element, Policy 10-61, page 10-64)

(2) City of Brentwood General Plan Policies. Brentwood General Plan goals and policies relevant to hazardous materials and conditions are cited in subsection 2.b above.

(3) Regional, State, and Federal Policies. The Regional Water Quality Control Board, CAL-EPA, and the Federal Comprehensive Environmental Response Compensation Liability Act of 1980 (CERCLA) each establish maximum permitted hazardous materials pollutant levels that are relevant to the project.

c. Significance Criteria

(1) Hazardous Materials Exposure. The project would be considered in this EIR to have a potentially *significant impact* if it could expose project occupants to past, existing, or

¹Levine-Fricke, Results of Soil and Water Sampling and Screening Health Risk Calculations, Cowell Ranch, December 30, 1993.

²Letter report by Harding Lawson Associates, page 3.

Bay Area. As a result, the potential for project-related health hazards associated with mercury in onsite soils would be low, and the project would have a ***less-than-significant impact*** (see Criterion #1 under "c. Significance Criteria" above).

Based on the findings of the Levine-Fricke Screening Health Risk Calculations, exposure to onsite soils is not expected to have detrimental effects on human health, even during excavation and construction activities.¹ Removal of reservoir sediments is also not expected to pose a significant health risk or environmental hazard, particularly if standard dust control methods are employed during grading and excavation.

Mitigation for Impacts Associated with Mercury In Onsite Soil. No significant impacts identified; no mitigation measures necessary.

Impact PHS-4: Exposure of Project Occupants to Mercury in the Adjacent Marsh Creek Reservoir. Project occupants may be exposed to mercury in Marsh Creek Reservoir water and sediment, if occupants enter the reservoir site for recreation or other purposes. This represents a ***potentially significant impact*** (see Criterion #1 under "c. Significance Criteria" above.)

The sampling of Marsh Creek Reservoir water, completed under high suspended sediment conditions (March sampling) shows detectable amounts of mercury ranging from 1.05 to 1.74 ppm. Sampling of reservoir sediments and site soils indicates the presence of mercury in runoff into Marsh Creek Reservoir from upstream sources (i.e., Mt. Diablo Quicksilver Mine) after heavy rainfalls.

Mitigation PHS-4: Prior to initiating construction of the first development phase, require the project applicant to work with the County to provide a secure fence around the Marsh Creek Reservoir to discourage public access until clean-up has been completed and mercury levels are found to be at 0.5 ppm or lower. The fence shall include signage at regular intervals warning of the mercury contamination health hazards associated with swimming and/or fishing in the reservoir. This measure would reduce the impact to a ***less-than-significant level***.

Because mercury is being transported through Marsh Creek and discharging into the reservoir, the identified offsite contamination problem is under the jurisdiction of the RWQCB. Based on the Slotten report, it is anticipated that clean-up of the contamination source at the Mt. Diablo Quicksilver Mine will proceed. Until such time that remediation of

¹Levine-Fricke. Results of Soil and Water Sampling and Screening Health Risk Calculations, Cowell Ranch, December 30, 1993.

Mitigation PHS-6: Require notification of golf course spraying schedules to project residents within 500 feet. Post notices on areas that will be sprayed and prohibit golf course spraying on windy days. Require personnel engaged in the application of herbicides or pesticides to follow manufacturer's directions as well as local, state, and federal regulations regarding their use, storage and disposal. These measures, combined with those identified in *Mitigation AG-3*, would reduce the impact to a ***less-than-significant level***.

Generally only California Certified Pesticide Applicators can handle and apply farm and golf course chemicals. Please refer also to EIR section IV.B, Agriculture, for further discussion of the compatibility of proposed urban uses and agricultural and associated mitigation needs.

Impact PHS-7: Exposure to Stored Hazardous Materials. Future project occupants may be exposed to accidental spillage or leakage of hazardous materials stored in onsite commercial, golf course, and open space (agricultural) areas. This represents a ***potentially significant impact*** (see Criterion #2 under "c. Significance Criteria" above).

Hazardous substances may be stored onsite in association with the proposed business park, commercial, golf course, and open space (agricultural) uses. Agricultural chemicals, fuels, paints, solvents, and oil products are among the hazardous materials that could potentially be stored and used.

Many of the same hazardous waste issues that apply to agriculture and golf course maintenance are potentially applicable to the proposed business park and commercial uses. Certain businesses, such as a dry cleaners or automobile maintenance activities, may use or generate significant amounts of hazardous materials. Such activities can present a significant risk to public health and safety. Generally, local, state, and federal agencies closely regulate storage, use, and disposal of hazardous materials. Exposure therefore would be associated with accidental spills that cannot be contained, or illegal/unauthorized releases.

Mitigation PHS-8: Implement *one* of the following measures: (a) backfill all surface and underground mine workings; (b) collapse existing mine workings, backfill, and grade ridge; or (c) remove the safety hazard by commercial mining and processing of sand prior to urban development. Implementation of any one of these measures would reduce the identified hazardous condition impact to a ***less-than-significant level***.

As recommended by Harding Lawson Associates, implement one of the following measures:

(a) *Backfill All Surface and Underground Workings.* Prior to development of the Cowell Ranch project, fill and/or grout open pits, underground rooms and underground workings with rock waste.

(b) *Collapse Existing Workings, Backfill, and Grade Mine Ridge.* Prior to development of the Cowell Ranch project, collapse existing rooms, pillars, and underground workings; backfill all open pits using onsite material, and grade the mine ridge. Subsequent development could include excavating the loose sand fill in the old workings and recompacting it to provide for unrestricted use, including siting structures over the former mine.

(c) *Remove Safety Hazard by Commercial Mining and Processing of Sand.* Phase development in the vicinity of the sandstone in a sequence that would permit full mining of the sandstone deposit prior to urban developments. The mine area would be more secure from unauthorized public use during this operational period, and, when available resources are extracted, could be closed in a safe condition. Development of Planning Areas 39, 40, 42, 44, 45, 46, 49 and 50 should not occur until the sandstone has been mined. (See section IV.H, Mineral Resources, for further discussion of this option.)

N. ENERGY

The following section describes existing energy usage on the project site, identifies pertinent, energy-related goals and policies, describes criteria used to determine the significance of energy-related impacts, and identifies associated project impacts and mitigation needs.

For purposes of consistency and comparison, all energy use calculations in this section are presented in a common unit of measurement, the therm. A therm is a unit of heat energy equivalent to 100,000 British thermal units (BTUs), 29.29 kilowatt hours (kWh) of electricity, or about 0.80 gallons of gasoline (upon combustion).

- r *Note: For a description of project impacts on facilities owned by PG&E, please see Draft EIR pages IV.A--20 and 46, IV.M--1, and IV.M--9 through 14 (PG&E Gas Terminal and Compression Station, electrical transmission lines, and natural gas lines).*

1. SETTING

Existing onsite energy usage is limited to insignificant amounts associated with the two onsite households, and onsite agricultural activities. Current transportation-related energy consumption associated with these uses consists of automobile and farm equipment usage by the ranchers and agricultural workers.

r 2. RELEVANT ENVIRONMENTAL POLICIES AND GUIDELINES

- r Pertinent Contra Costa County and City of Brentwood policies and guidelines related to energy consumption are identified below.

a. Contra Costa County Conditions for a 21st Century Community

The following policies from Contra Costa County's Conditions for a 21st Century Community document are relevant to energy use:

- *Energy conservation and waste reduction goals should be advanced by the project.* (Waste Minimization/Energy Conservation section, Policy 1)
- *Design a project that maximizes energy conservation and efficiency.* (Waste Minimization/Energy Conservation section, Policy 3)

b. Principles and Guidelines for Cowell Ranch

The Principles and Guidelines for Cowell Ranch document adopted by the Contra Costa County Board of Supervisors contains the following guideline related to energy consumption:

Construction-period energy use would occur temporarily for each phase and individual project increment over the anticipated 25-year buildout period. Energy usage for construction can be calculated based on a typical average rate of ten therms per square foot of new building area, a rate that includes energy required to fabricate and transport construction materials to the site and energy to construct the proposed structures.¹

The 5,226 dwelling units proposed by the project would equal an estimated 10.5 million square feet of building area (assuming an average of 2,000 square feet per unit) and would therefore be expected to consume approximately 105 million therms of energy to construct. The approximately 1.9 million gross square feet of proposed commercial space would be expected to consume approximately 19 million therms of energy to construct. The estimated total energy that would be required to construct the project would be approximately 124 million therms, plus that required for the construction of community facilities and infrastructure.

Assuming that construction energy consumption would not occur in a manner that could be classified as wasteful, inefficient, or unnecessary, energy consumption during project construction would constitute a less-than-significant impact.

Mitigation for Potential Short-Term Construction Energy Impacts. No significant impacts have been identified, and therefore no mitigation is required.

Impact E-1: Long-Term Project Energy Use Impact. At buildout, the residential, business park, commercial and public facility uses proposed by the project would use an estimated 7.17 million therms of energy each year. This is considered a ***potentially significant project and cumulative impact*** (see Criterion #1 under "3. Significance Criteria" above).

(a) *Residential Uses.* The project residential units would consume energy for lighting, heating, cooling, ventilation, and cooking. Based on a standard energy usage figure of 680 therms per unit for conventional dwelling units,² it is estimated that the proposed 5,226 units would consume up to 3.55 million therms annually.

(b) *Business Park/Commercial Uses.* The business park and commercial components of the project would consume energy for lighting, heating, cooling, ventilation, water heating, and restaurant operations. Based on an assumed average energy usage figure of 1.38 therms per square foot annually for conventional commercial space, it is estimated that the 1.9 million

¹California State Energy Commission (D.B. Goldstein and A. H. Rosenfeld), Conservation and Peak Power Cost Demand, 1975.

²This assumes 6,150 kWh of electricity and 470 therms of gas per year per unit.

gross square feet of business park and commercial uses proposed by the project could consume up to 2.62 million therms annually at buildout.

(c) *Public/Semi-Public Facilities Uses.* The project-proposed *Public/Semi-Public*-designated areas would contain approximately 726,000 square feet¹ of community facility buildings included in the project (schools, fire station, community centers, post office, and religious institutions). These uses would consume up to approximately one million therms annually at buildout, assuming energy usage would be comparable to that estimated for conventional commercial space (1.38 therms per square foot).

(d) *Cumulative Impacts.* These project impacts, in combination with other recently approved and pending development projects in the county, would also constitute a significant cumulative impact.

Mitigation E-1: Require the project to comply with Title 24 Energy Efficiency Standards. This measure would reduce onsite energy-related impacts of the project to a *less-than-significant level*.

The project construction design would be required to comply with Title 24 Energy Efficiency Standards set forth in the California Administrative Code. Compliance with the following measures would allow the project to meet or exceed these standards:

- Where possible given local terrain, streets should be oriented such that the principal streets are running primarily east/west. This orientation provides for optimum solar gain as well as the best shelter of streets from the winter west-northwesterly winds. Solar access to south-facing winter heating and shading of low morning and afternoon summer heat gain are the primary reasons for this guideline.
- Building orientation and solar access should be considered in choosing housing types. Application of passive solar technology in residential design suggests differing unit types for differing exposures. For example, the front facade of a north-facing home should be different from the home opposite it with full southern exposure.
- Residential and commercial buildings should use natural daylight. Residential and commercial buildings should provide at least 75 percent of their daytime lighting needs with natural daylighting. Possible technologies include interior light courts, clerestory windows, lightshelves (reflecting daylight onto light-colored surfaces), mirror systems, skylights, windows on at least two sides of every room in a house, and narrow floor plates in commercial buildings.
- Thermal mass, such as a concrete or tile floor or masonry wall, should be part of every residential unit's design as needed to meet Title 24 standards.

¹This assumes 48,600 square feet of building area per elementary school (97,200 square feet for two elementary schools), 82,800 square feet for the middle school, 396,000 square feet for the community college, and 150,000 square feet of other community facility space.

- Windows should not receive direct sunlight during the hours of 10:00 AM to 4:00 PM between March 21 and September 21. Walls and windows facing east, south and west

e. Drainage, Flood Control, and Water Quality. Under this alternative, existing drainage, flooding, and water quality conditions on and downstream from the Cowell Ranch would not change. No new development would be added to the site that would be subject to flooding, the duration of peak flow in Marsh Creek would not increase, and water quality in Marsh Creek would not deteriorate. Drainage improvements proposed by the project would not be constructed, and existing flooding problems described in section IV.E (Drainage, Flood Control, and Water Quality) would continue to occur.

f. Public Facilities and Services. Under this alternative there would be no project-related increased demand for water, sewage treatment and disposal, police protection, fire protection, emergency medical service, parks and recreation, schools, child care, solid waste collection and disposal, road maintenance, or other public services and facilities. Onsite schools, parks, and recreational facilities (e.g., the *Round Valley to Big Break Trail* right-of-way and trailhead), and the community college proposed by the project would not be constructed.

g. Biological Resources. The no project alternative would not change conditions onsite and therefore would not affect current vegetation, wildlife habitat, or wildlife use on the site. This alternative would not result in a reduction in habitat for any special status wildlife species. None of the impacts described in section IV.G.4 of this EIR would occur.

h. Mineral Resources. Under the no project alternative, the domengine sandstone deposit would remain available for mining. The potential for mining this resource would not be precluded or inhibited.

i. Cultural Resources. No changes in the conditions of onsite prehistoric and historic cultural resources would occur under this alternative. None of the impacts on cultural resources described in section IV.I.4 of this EIR would occur. There would be no construction activity that could result in unearthing of and damage to prehistoric or historic resources.

j. Visual Factors. Under this alternative there would be no change in the visual character of Cowell Ranch. No conversion of onsite rural areas to urban use, construction on project site hillsides and ridges visible from scenic routes, and onsite detractions from existing views of high quality and sensitivity would occur.

k. Air Quality. Under the no project alternative, there would be no measurable change in air quality due to onsite activities. No construction would occur, and therefore, there would be no corresponding increase in dustfall or elevated levels of PM-10 associated with the site. No additional vehicular traffic and associated traffic congestion would be generated under this alternative, and consequently, there would be no long-term regional air quality impacts. None of the impacts described in section IV.K.4 of this EIR would occur.

l. Noise. Under this alternative, there would be no new site occupants exposed to high noise levels associated with traffic on adjacent roadways, aircraft from the East Contra Costa County Airport, or noise from the adjacent PG&E Gas Terminal and Compressor Station.

Existing

residents on Concord Avenue, Payne Avenue, and Walnut Boulevard would not be exposed to an increase in noise levels due to project-generated traffic.

r m. Public Health and Safety. Under this alternative, there would be no increase in the population or employment totals onsite, and therefore no additional exposure of people to electric and magnetic fields associated with the overhead electrical transmission lines. Under
r this alternative, no residential uses would be developed adjacent to the PG&E Gas Terminal and Compressor Station, and there would be no associated risk of exposure to a fire or explosion. The potential exposure of site occupants to herbicide and pesticide use and to hazardous materials that may be handled or stored onsite under the proposed project would not occur under the no project alternative.

n. Energy. Energy usage would not change under the no project alternative. There would be no increase in the demand for natural gas, electricity, or fuel associated with the site.

B. NO GENERAL PLAN AMENDMENT ALTERNATIVE

1. Principal Characteristics

This alternative is a variation on the CEQA-required "no project" alternative described above. The no general plan amendment (GPA) alternative consists of maximum onsite buildout over the years to development levels currently permitted under the existing County General Plan designations (*Agricultural Lands*, with a very small area of *Agricultural Core*) and zoning (*A-4: Agricultural Preserve*).¹ It is anticipated that up to 16 rural "ranchette" houses could be developed under this alternative, based on (1) the existing legal lot pattern on the project site, (2) the 20-acre minimum lot size required by the *A-4* zoning,² and (3) the requirement, based

¹This alternative is based primarily on the development potential of the site's current *A-4* zoning. It should be noted that the site's primary existing general plan designation (*Agricultural Lands*) allows one unit per five acres (*Land Use Element*, page 3-37), provided that subdivision of properties in this designation complies with the general plan "Ranchette Policy" (*Conservation Element*, Implementation Measure 8-w, pages 8-43 through 8-45), which includes requirements for water availability, roads and access, septic tank use, minimal grading, energy conservation, limited flooding and landsliding susceptibility, and adequate fencing. Based solely on the development potential implied by the existing *Agricultural Lands* designation, up to approximately 855 rural "ranchette" houses could be developed on the project site. County staff generally considers this alternative to be infeasible, however, based on Ranchette Policy requirements and general plan provisions discouraging major subdivision of agricultural lands (e.g., *Conservation Element*, Implementation Measure 8-y) (Jim Cutler, Chief, Comprehensive Planning, Contra Costa County Community Development Department, personal communication, July 31, 1996).

²County of Contra Costa, Contra Costa County Code, Title 8, Planning and Zoning, September 16, 1992; Section 84-42.602, which states that "*no structure permitted in the A-4 district shall be placed or erected upon a parcel smaller than twenty acres.*"

g. Biological Resources. This alternative would not result in significant impacts on biological resources, because of the very limited, rural residential development proposed.

h. Mineral Resources. This alternative has the potential to affect the onsite domengine sandstone deposit, depending on the siting of the dwelling unit on the parcel containing this deposit. It is expected, however, that the mitigation recommended for the project (i.e., phased development to permit mining) could be readily implemented under this alternative.

i. Cultural Resources. The no GPA alternative could have a potentially significant impact on cultural and historic resources, depending on siting of dwelling units and locations of future agricultural activities. However, because the land area affected by development under this alternative is substantially reduced, and the ability to avoid disturbance of sensitive archaeologic or historic sites substantially increased, the impacts would be far less than those described under the proposed project.

j. Visual Factors. The vast majority of the site would remain in agricultural use or open space under this alternative. No significant visual impacts would be expected.

k. Air Quality. No significant air quality impacts would be expected under this alternative.

l. Noise. The site would be subject to noise intrusion comparable to that described for the proposed project, due to anticipated cumulative traffic volumes on local roadways and the proposed SR 4 Bypass, aircraft overflights from the East Contra Costa County Airport, and the PG&E Gas Terminal and Compressor Station. However, because the land area required for development under this alternative is very limited, areas of the site subject to high noise levels could be excluded from the areas to be developed under this alternative. No significant noise impacts would be expected due to traffic generated by this alternative.

m. Public Health and Safety. The public health and safety impacts associated with this alternative would be less significant than those associated with the proposed project. Due to the reduced amount of land required for development, and the increased flexibility to locate uses away from such constraints, impacts associated with the overhead electrical transmission lines, underground natural gas lines and petroleum pipelines, and PG&E gas terminal and compressor station, could be substantially reduced or eliminated. Herbicide and pesticide use and storage reductions associated with elimination of the golf course would be offset by the potential impacts associated with the increased agricultural activities possible under this alternative.

n. Energy. The no GPA alternative would not result in a substantial amount of energy use.

(c) special landscape design guidelines for onsite creek corridors (mitigating *Impact V-10*);

(d) requirements for strategic planting of screen vegetation for all single-family lots and all multi-family units within 150 feet of the edge of onsite PG&E 230 kV transmission line easement, and at other key onsite vantage points with views of these transmission lines and towers (mitigating *Impact V-11*); and

(e) setback and landscaping requirements for project development areas surrounding the PG&E Gas Terminal and Compressor Station (mitigating *Impact V-12*).

(3) **Revisions to Circulation Plan.** Under this alternative, the proposed project circulation plan would be revised to:

(a) provide a separate access road for the community college (Planning Area 37) along the northern edge of Planning Area 38 (mitigating *Impact T-8*); and

(b) provide for a new east-west arterial south of Balfour Road along the Briones Valley Road corridor (connecting Deer Valley Road and Cowell Parkway), and a second grade-separated crossing of the SR 4 Bypass between its intersections at Balfour Road and Marsh Creek Road (mitigating *Impact T-2*).

(4) **Revisions to Proposed Parks.** Under this alternative, the proposed neighborhood parks in Planning Areas 34 and 54 would be increased in size to a minimum of five acres, to meet the Brentwood Park and Recreation Master Plan size standard for passive neighborhood parks. In addition, the community park would be expanded and reconfigured to accommodate standard-size playfields (e.g., baseball diamonds), associated parking, safe access, and other community park features. These revisions to the project would mitigate *Impact PF-15*.

b. Development Capacity. Table 82 indicates the reduction in project development capacity anticipated in the affected Planning Areas under the Mitigated Alternative, as compared with the proposed project. As shown in the table, the alternative would allow a total of approximately 802 dwelling units in the affected development areas, as compared with 1,532 units proposed by the project. The development capacity reduction, which would total approximately 730 units (1,532 minus 802 = 730) could, through project redesign, be partially or fully relocated to another location of the site, such as the Briones Valley corridor, which under the mitigation recommended for *Impact T-2* in section IV.C, Transportation, could be served by a new east-west arterial south of Balfour Road. In this light, it is assumed in this analysis that this Alternative C would include between **4,496 and 5,226 units**. Development totals for non-residential urban land uses proposed by the project would remain the same under the Mitigated Alternative.

i. Cultural Resources. Cultural resource impacts of this alternative would be similar to those described for the proposed project.

j. Visual Factors. Compared with the proposed project, this alternative would reduce the visual impacts of site development as seen from certain key viewpoints. Reduction and elimination of development in Planning Areas 52 and 61, respectively, would help to minimize the visual impact of the project on views from the Camino Diablo/Marsh Creek Road corridor, a County-designated "scenic route" that currently has a rural character. Similarly, reduction of development in Planning Areas 31 and 32 would reduce the visual impact of the project on views from Deer Valley Road, another County-designated "scenic route." Impacts on views from southern Brentwood, Walnut Boulevard, the SR 4 Bypass, and Briones Valley Road would be similar to those described for the project as proposed. Amendments to the *Cowell Ranch P-1 Planned Unit District Development Standards* incorporated into this alternative would reduce visual impacts on creeks, and visual impacts associated with onsite electrical transmission lines and the PG&E Gas Terminal and Compressor Station.

k. Air Quality. Like the proposed project, this alternative would produce significant impacts on regional air quality. However, the impacts of this alternative could be slightly lessened due to possibly reduced residential development and the shift in the jobs/housing ratio and associated traffic impacts.

l. Noise. The noise impacts of this project would be reduced due to setback requirements that would be established by this alternative for development areas adjoining the PG&E Gas Terminal and Compressor Station.

m. Public Health and Safety. Reduction of urban development in Planning Areas 31 and 32 would eliminate the potential for resident exposure to electric and magnetic fields (EMFs) from the overhead electrical transmission lines that traverse this portion of the site (see Figure 80 in section IV.M, Public Health and Safety). Health and safety risks associated with the PG&E Gas Terminal and Compressor Station would be reduced due to setback requirements that would be established by this alternative for development areas adjoining the facility.

n. Energy. Compared with the proposed project, the energy impacts of this alternative would be similar but slightly reduced, due to the reduction in the number of residential units that could be developed.

D. SR 4 BYPASS "MODIFIED NUNN ALIGNMENT" ALTERNATIVE

This alternative consists of an alternative project development plan that incorporates the SR 4 Bypass "Modified Nunn Alignment" currently being considered by various responsible agencies. The discussion that follows relates only to the portion of the Modified Nunn Alignment on or immediately adjacent to the Cowell Ranch property. The Final Environmental

Impact Report on the State Route 4 Bypass Project evaluates the broader environmental impacts of the various alternative alignments.

1. Principal Characteristics

Figure 82 illustrates the configuration of the SR 4 Bypass Modified Nunn Alignment and a possible development plan for the Cowell Ranch project site that incorporates the alignment. This figure may be compared with Figure 8 in section III, Project Description, which illustrates the applicant's proposed development plan incorporating the "Modified County Alignment" for the SR 4 Bypass. Figures 8 and 82 illustrate that, between Walnut Boulevard and a point immediately south of Orchard Avenue, the Modified Nunn Alignment and the Modified County Alignment propose the same location for the bypass right-of-way. Immediately south of Orchard Avenue, however, the Modified Nunn Alignment would extend past the southwest corner of the PG&E Gas Terminal and Compressor Station (see Figure 82), rather than along the northern boundary of the PG&E facility as proposed by the Modified County Alignment. The Modified Nunn Alignment would then continue northwest along a right-of-way located generally west of the Modified County Alignment. The Modified Nunn Alignment would require modifications to the configurations of the North Village subarea (Planning Areas 19-28) and the North Hills subarea (Planning Areas 7 and 9-11) proposed by the applicant's development plan, as can be seen by comparing Figures 8 and 82.

Tables 83 and 84 summarize development totals and the mix of residential uses for the Cowell Ranch project site under the Modified Nunn Alignment development plan. Table 85 compares land use summary data for the Modified Nunn Alignment alternative with that of the project as proposed, and Table 86 lists revised land use data for the specific project Planning Areas that would be modified by the Modified Nunn Alignment alternative (i.e., Planning Areas 7, 9-11, and 19-28).

2. Comparative Impacts and Mitigating Effects

a. Land Use. Unlike the proposed project, the Modified Nunn Alignment alternative would provide for commercial/office uses along the SR 4 Bypass (in Planning Areas 10 and 11). Compared with the proposed project, this alternative would reduce the amount of open space/park frontage along this right-of-way; as a result, the commercial uses, along with proposed business park, community college, and residential uses, would be subject to additional Bypass-related land use compatibility effects related to visual factors, air quality, and noise, similar to those described for the project (*Impact LU-13*). In addition, under this alternative, the commercial/office uses (Planning Area 10) and residential uses (Planning Area 22) on the north side of the SR 4 Bypass would adjoin the PG&E Gas Terminal and Compressor Station and may be exposed to potential hazards (e.g., explosions) from the facility; this effect would be partially mitigated by the provision of 100-foot buffers between the PG&E facility and residential uses in Planning Area 22. Other land use impacts of this alternative would be similar to those described for the proposed project.

b. Agriculture. Unlike the Modified County Alignment, which is incorporated into the proposed project, the Modified Nunn Alignment would not separate urban land uses in the northeastern corner of the project site from agricultural uses on the adjoining *Agricultural Core*-designated Lopez/Nunn Ranch properties (see Figure 17 in section IV.A, Land Use). Under the Modified Nunn Alignment alternative, residential uses in Planning Area 22 would adjoin these agricultural uses, creating the potential for health risks and nuisance complaints. Other impacts of this alternative on agricultural activities would be similar to those described for the project.

c. Transportation. Unlike the proposed project development plan, the development plan incorporating the Modified Nunn Alignment would include a project-serving vehicle underpass under SR 4 that would extend Fairview Avenue into the North Village subarea. In addition, the Modified Nunn Alignment would extend along the western side of the PG&E Gas Terminal and Compressor Station and cross Marsh Creek at a location west of that proposed by the Modified County Alignment. This more westerly alignment would create the potential for inadequate spacing between the future interchange ramp and the proposed arterial street; 400 feet is the minimum allowable distance, based on Caltrans standards, for the proper operation of the signalized ramps and the signalized turn lanes of the arterial street.

The traffic impacts of this alternative would be significant, but slightly less substantial than those associated with the proposed project. This would primarily be due to the fact that the amount of residential development, and therefore the number of vehicle and other trips generated, would be less than under the proposed project.

d. Soils and Geology. The soils and geology impacts of the Modified Nunn Alignment alternative would be similar to those described for the proposed project.

e. Drainage, Flood Control, and Water Quality. The drainage, flood control, and water quality impacts of the Modified Nunn Alignment alternative would be similar to those described for the proposed project; however, the development of residential uses, rather than parks and open space, in the northeastern corner of the site adjacent to Marsh Creek could create a greater potential for flooding in this reach of the creek.

f. Public Facilities and Services. Compared with the proposed project, the Modified Nunn Alignment alternative would produce slightly less demand for water and sewer services; the alternative would generate a total water demand of approximately 2,650,350 gallons per day (as compared with 2,698,430 gallons per day estimated for the proposed project), and would generate total peak wastewater flows of approximately 3,557,797 gallons per day (as compared with 3,639,320 gallons per day estimated for the proposed project). Impacts on water and sewer service providers would be similar to those described for the project.

Similarly, due to the reduced number of housing units, this alternative would have slightly less impact on police, fire, parks and recreation, schools, and child care services, compared with the project as proposed, although mitigation measures described for the project would also

apply to this alternative. Impacts on solid waste services, road maintenance, and other public facilities and services would be similar to those described for the proposed project.

g. Biological Resources. Compared with the proposed project, the Modified Nunn Alignment and adjoining development under this alternative would be expected to have a greater impact on Marsh Creek and associated riparian habitat, since the alignment would intersect Marsh Creek Road at a location very close to Marsh Creek and the Bypass on- and off-ramps, in addition to the Bypass itself, would cross the creek.¹ Other biological resource impacts associated with this alternative would be similar to those described for the proposed project.

h. Mineral Resources. Impacts of the Modified Nunn Alignment alternative on mineral resources would be the same as described for the project.

i. Cultural Resources. Impacts of the Modified Nunn Alignment alternative on cultural resources would be the same as described for the project.

j. Visual Factors. Figure 83 illustrates areas of the project site and background that would be visible from the Modified Nunn Alignment. As shown by the figure (in comparison with Figure 68 in section IV.J, Visual Factors, which illustrates duration of views from the project-proposed Modified County Alignment), the Modified Nunn Alignment would produce more extensive views of urban development in the North Hills and North Village subareas from the SR 4 Bypass, although sound walls and elevated overpass structures associated with the Bypass may block views at some locations. Other visual impacts of this alternative would be similar to those described for the proposed project.

k. Air Quality. Under this alternative, the commercial/office and residential uses on the north side of the SR 4 Bypass would be exposed to air emissions from vehicles traveling on the Bypass. Other air quality effects would be similar to those described for the project as proposed.

l. Noise. Under this alternative, the SR 4 Bypass would be aligned along the western side of the PG&E gas terminal and compressor station. Figure 84 illustrates year 2026 60 L_{dn} noise contours for roadway traffic (including traffic on the SR 4 Bypass) under this alternative. As illustrated by the figure, substantially higher noise levels would occur on the project site north of Marsh Creek Road under this alternative, as compared with the proposed project. Specifically, Planning Area 7, 8, 10, 11, 20, 22, and 23 would be exposed to substantially higher noise levels under the Modified Nunn Alignment. Under this alternative, Planning Area 10 would be redesignated from multi-family low-density residential to commercial, a less noise-sensitive

¹State Route 4 Bypass Alternative Alignment Study Between Vasco Road and Briones Valley Road, prepared by the Contra Costa County Public Works Department as Staff to the State Route 4 Bypass Authority, November 21, 1994, page 14.

land use that would be more appropriate for this planning area given that it would be located between the SR 4 Bypass and the PG&E gas terminal and compressor station. However, the redesignation of Planning Area 22 from commercial to multi-family low density residential would place additional housing in this area that would be exposed to noise levels substantially exceeding the 60 dBA L_{dn} goal of Contra Costa County. In summary, this alternative, compared with the project as proposed, would expose larger areas of the project site to noise levels above those considered "normally acceptable" for the proposed land uses.

m. Public Health and Safety. Under the Modified Nunn Alignment alternative, commercial/office and residential uses on the north side of the SR 4 Bypass would adjoin the PG&E Gas Terminal and Compressor Station and may be exposed to potential hazards (e.g., explosions) from the facility. The development plan for the Modified Nunn Alignment alternative includes allowances for 100-foot buffers between the residential uses and the PG&E facility. Compliance with mitigation measures recommended for the proposed project (e.g., buffer areas, disclosure of hazards to occupants) would also mitigate impacts associated with this alternative. Other health and safety-related impacts of the Modified Nunn Alignment alternative would be similar to those described for the proposed project.

n. Energy. Compared with the project as proposed, the Modified Nunn Alignment alternative would produce slightly less energy demand, due to the reduced number of housing units; the project is estimated to require 7.17 therms of energy each year, while annual energy use by the Modified Nunn Alignment alternative is projected to be approximately 7.08 therms. Mitigation measures described for the project would also apply to this alternative.

E. ALTERNATIVE SITES

Section 15126(d) of the CEQA Guidelines indicate that the EIR evaluation of alternatives may include alternatives to the location of the project. Section 15126(d)(5)(B)(1) of the CEQA Guidelines further states that *"the key question and first step in analysis [of whether to prepare an analysis of alternative sites] is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR."*

This section includes an identification of a range of alternative sites within the same general market area being considered for the proposed project, and a comparative evaluation of the ability of these alternatives to (1) reduce the environmental impacts associated with development on the Cowell Ranch site, and (2) meet one or more basic objectives of the project.

Market Area. Based on an evaluation of regional home sale prices, it was determined that the general market area of the Cowell Ranch project includes eastern Contra Costa County, western San Joaquin County, and eastern Alameda County. Comparative home sales prices

frogs and California tiger salamanders are less likely with the development of Antioch FUA #1 than with Cowell Ranch.

h. Mineral Resources. Mineral resources would be affected by development on both the proposed project site and this alternative site. A portion of the Brentwood Oil and Gas Field is located within FUA #1. The proposed project site contains a Domengine Sandstone deposit.

i. Cultural Resources. Based on their familiarity with Cowell Ranch and FUA #1, Holman & Associates, the EIR archaeologist, has determined that the cultural resource impacts under this alternative would be comparable to the proposed project.

j. Aesthetic and Visual Resources. Development of the proposed project on either FUA #1 or the proposed site would be expected to result in similar visual effects. However, it appears that FUA #1 is not visible from as many designated scenic routes as the proposed site. Therefore, the visual impacts of this alternative would be somewhat less significant.

k. Air Quality. To the extent that the traffic impacts would be reduced under this alternative, so would air quality impacts. The overall impact of this alternative on local and regional air quality would be comparable to that of the proposed project, however.

l. Noise. The proposed SR 4 Bypass alignment traverses the eastern portion of FUA #2, but not FUA #1. As a result, traffic-generated noise exposure would probably be slightly less under this alternative since FUA #1 is not located adjacent to the proposed Bypass. Overall noise impact potentials would also be less under this alternative since the noise from the PG&E Gas Terminal and Compressor Station, noise associated with the potential operation of the Kellogg Creek Quarry, and noise associated with Byron Airport, would be avoided.

m. Public Health and Safety. FUA #1 contains existing petroleum extraction and pipeline facilities and an abandoned coal mine. This alternative does not appear to represent a better choice than the proposed site with respect to public health and safety.

n. Energy. The energy impacts due to development of the project on FUA #1 would be slightly reduced compared to those that would result from development on the proposed site due to shorter driving distances; FUA #1 is closer to existing employment centers and other development.

2. North Livermore Site

Alameda County's East County Area Plan (ECAP)¹ covers approximately 418 square miles of eastern Alameda County, from the Contra Costa County line on the north to the Santa Clara

¹The information regarding the East County Area Plan is based on the Draft Environmental Impact Report, East County Area Plan, prepared by Alameda County, June 1993.

No kit fox have been detected in the area, either historically or during recent surveys by several different consultants. Therefore, the EIR biological resource consultants believe that impacts to kit fox are likely to be less significant for this alternative site than for the proposed project. However, the USFWS considers the North Livermore Plan area to be "occupied" by kit fox and would be expected to request similar mitigation at a 3:1 ratio.

The ECAP includes a number of policies that would preserve a substantial amount of biological habitat in eastern Alameda County. The policy framework for eastern Alameda County provides an opportunity to reduce cumulative biological impacts. No comparable policy framework exists in eastern Contra Costa County. Therefore, cumulative biological impacts would be reduced under this alternative.

h. Mineral Resources. There are no known significant mineral resources on the North Livermore planning area, and the majority of the site has been designated by the California Division of Mines and Geology (CDMG) as MRZ-1, i.e., having little or no mineral deposits. The CDMG has designated a very small area as MRZ-4, which means that the existing geologic information is inadequate to make a determination of the absence or presence of minerals. Based on this information, it appears that mineral resource impacts would be reduced under this alternative.

i. Cultural Resources. The North Livermore area contains Cayetano Creek. The area around this creek bed is considered to be of high to extreme sensitivity for prehistoric cultural resources. The alluvial slopes north of I-580 are classified as sensitive because they may contain prehistoric cultural resources. There are also three historic sites in the North Livermore planning area. There are two sites containing prehistoric resources and four sites containing historic resources on Cowell Ranch site that could be significantly affected by the proposed project. Based on the information available, it is reasonable to assume that development on either site could result in potentially significant impacts on cultural resources.

j. Visual Factors. The North Livermore area is located within the I-580 scenic corridor, which extends 3,500 feet north and south of the freeway. Development with this corridor could adversely affect views from I-580. The visual impacts associated with this alternative would be comparable, and possibly more significant than the visual impacts of the project on the proposed site.

k. Air Quality. Air quality in eastern Contra Costa County is generally better than air quality in the Livermore Valley. The air quality impacts under this alternative would probably be more significant locally than under the proposed project, although regional impacts would be similar due to the similar scale of this alternative and the proposed project.

l. Noise. Portions of both Cowell Ranch and this alternative site would be subject to traffic-generated noise levels exceeding 60 dBA (Ldn). Also, both sites would be somewhat affected by noise generated by aircraft overflights. Because the North Livermore site would not be
r affected by noise generated by the potential operation of the PG&E Gas Terminal and

- r Compressor Station and quarry that are adjacent to Cowell Ranch, this alternative may be slightly superior from a noise perspective.

m. Public Health and Safety. The EIR prepared for the North Livermore General Plan did not assess whether there are hazardous materials on the site or in the vicinity. Therefore, it is not possible to make a determination regarding whether public health and safety impacts would be reduced under this alternative. According to City of Livermore staff, however, previous agricultural uses would be the only likely source of soil or groundwater contamination in the North Livermore area.¹

n. Energy. The energy impacts associated with this alternative would be slightly reduced compared to the Cowell Ranch site due to the potential for reduced vehicle use; as noted under item c, Transportation, above, North Livermore is closer to existing development and would therefore result in less long distance travel, is served by a higher-capacity freeway system, and is closer to existing and planned BART stations.

3. Alternative Sites Given Initial Consideration and Dismissed

a. Dougherty Valley Specific Plan Site. The location of the proposed Dougherty Valley Specific Plan site is illustrated on Figure 15. Dougherty Valley encompasses 6,000 acres of land located in Central Contra Costa County between Danville and San Ramon.

This site was initially considered as an alternative site, but was dismissed for two primary reasons. First, development on the Dougherty Valley site would not be expected to result in less significant impacts than those associated with development of Cowell Ranch; for example, questions have been raised about whether water sources would be adequate to serve development on the Dougherty Valley site. Second, the Dougherty Valley site is located within an entirely separate housing market area from the East County area, where the Cowell Ranch site is located. The median home price for a three-bedroom/two-bath single-family home in August 1994 was \$348,000 in Danville and \$230,000 in San Ramon, as compared to \$156,000 in Antioch.²

b. Tassajara Valley Property Owners Association Specific Plan Site. Another potential alternative site in central Contra Costa County, outside of the project market area, that was initially given consideration was the approximately 6,000-acre Tassajara Valley Property Owners Association (TVPOA) Specific Plan area. As illustrated on Figure 15, the TVPOA site is located adjacent to and east of the Dougherty Valley Specific Plan area. However, a specific project application to develop 5,950 dwelling units and 68 acres of commercial space

¹Frost.

²San Francisco Examiner, "Home Values/Contra Costa County," September 4, 1994, page E-5.

VI. CEQA-REQUIRED ASSESSMENT CONCLUSIONS

This section summarizes the master EIR findings in terms of the various assessment categories suggested by the California Environmental Quality Act (CEQA) Guidelines for EIR content. Report findings are summarized with respect to "growth inducement," "unavoidable and irreversible adverse impacts," "effects found not to be significant," and "cumulative impacts."

A. GROWTH-INDUCING EFFECTS

(1) Direct Population, Housing, and Employment Increases. The proposed project would add approximately 5,226 residential units to the East County by the year 2025, which would provide housing for an estimated 13,076 people. The project would also add approximately 1.86 million square feet of commercial and industrial floor space, several schools, a community college campus, and other community facilities that would provide space for an estimated 6,628 jobs by the year 2025.

(2) Precedent-Setting Effects. Under the site's existing Contra Costa County General Plan land use designation (*Agricultural Lands*, with a very small area of *Agricultural Core*), up to 16 residential units could be developed onsite. The applicant is requesting a General Plan Amendment to change the designation to various residential, commercial, and other designations in order to accommodate true planned unit development of 5,226 residential units, 1.86 million square feet of commercial and industrial floor space, and various community facilities (schools, a community college campus, parks, etc.). A modification in the County-designated *Urban Limit Line* is also requested that would change the *ULL* boundary but would result in no net change in the number of acres within the *ULL*.

If the requested General Plan Amendment were granted, it could encourage owners of other nearby property currently designated for agricultural or rural use to seek similar General Plan Amendments to permit urban development. Similarly, the proposed *Urban Limit Line* modification, while it would result in no net change in the number of acres within the *ULL*, could encourage *ULL* adjustment requests elsewhere in the county in order to allow similar urban development.

Key properties that are currently located outside but contiguous to the Brentwood and Antioch spheres of influence, and are designated for agricultural or rural residential use under the County General Plan, are illustrated on Figure 17. They include Brentwood General Plan designated SPA "G," SPA "H," SPA "I," and SPA "K," plus the Ginnocchio and Roddy Ranch.

APPENDIX G:

SUPPLEMENTAL CULTURAL RESOURCES INFORMATION

(CEQA Guidelines Appendix K ("Archaeological Impacts"))

APPENDIX K

ARCHAEOLOGICAL IMPACTS

- I. CEQA applies to effects on historic and prehistoric archaeological resources.
- II. Public agencies should seek to avoid damaging effects on an archaeological resource whenever feasible. If avoidance is not feasible, the importance of the site shall be evaluated using the criteria outlined in Section III.
 - A. In-situ preservation of a site is the preferred manner of avoiding damage to archaeological resources. Preserving the site is more important than preserving the artifacts alone because the relationship of the artifacts to each other in the site provides valuable information than can be lost when the artifacts are removed. Further, preserving the site keeps it available for more sophisticated future research methods. Preservation may also avoid conflict with religious or cultural values of groups associated with the site.
 - B. Avoiding damage may be accomplished by many approaches, including:
 1. Planning construction to miss archaeological sites;
 2. Planning parks, greenspace, or other open space to incorporate archaeological sites;
 3. "Capping" or covering archaeological sites with a layer of soil before building tennis courts, parking lots, or similar facilities. Capping may be used where:
 - a. The soils to be covered will not suffer serious compaction;
 - b. The covering materials are not chemically active;
 - c. The site is one in which the natural processes of deterioration have been effectively arrested; and
 - d. The site has been recorded.
 4. Deeding archaeological sites into permanent conservation easements.
- III. If the Lead Agency determines that a project may affect an archaeological resource, the agency shall determine whether the effect may be a significant effect on the environment. If the project may cause damage to an important archaeological resource, the project may have a significant effect on the environment. For the purposes of CEQA, and "important archaeological resource" is one which:
 - A. Is associated with an event or person of:
 1. Recognized significance in California or American history, or

2. Recognized scientific importance in prehistory.
 - B. Can provide information which is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable or archaeological research questions;
 - C. Has a special or particular quality such as oldest, best example, largest, or last surviving example of its kind;
 - D. Is at least 100 years old and possesses substantial stratigraphic integrity; or
 - E. Involves important research questions that historical research has shown can be answered only with archaeological methods.
- IV. If an archaeological resource is not an important archaeological resource, both the resource and the effect on it shall be noted in the Initial Study or EIR but need not be considered further in the CEQA process.
- V. If avoidance of the important archaeological resource is not feasible, the Lead Agency should include an excavation plan for mitigating the effect of the project on the qualities which make the resource important under Section III.
- A. If an excavation plan is prepared, it shall:
1. Be a brief summary of the excavation proposed as part of a mitigation plan;
 2. Be available for review only a need-to-know basis;
 3. Not include the specific location of any archaeological resources if the plan will be made known to the general public.
- B. An excavation plan may:
1. List and briefly discuss the important information the archaeological resources contain or are likely to contain;
 2. Explain how the information should be recovered to be useful in addressing scientifically valid research questions and other concerns identified in subdivision (a);
 3. Explain the methods of analysis and, if feasible, display of excavated materials;
 4. Provide for final report preparation and distribution; and
 5. Explain the estimated cost of and time required to complete all activities undertaken under the plan.
- C. The Lead Agency may require a mitigation plan to be carried out as a condition of approval of the project.

VI. A public agency following the federal clearance process under the National Historic Preservation Act or the National Environmental Policy Act may use the documentation prepared under the federal guidelines in the place of documentation called for in this appendix.

VII. Limitations on Mitigation

Special rules apply to mitigating significant effects on important archaeological resources.

A. If it is not feasible to revise the project to avoid an important archaeological resource, the Lead Agency shall require the project applicant to guarantee to pay one half of the cost of mitigating the significant effect of the project on important archaeological resources.

1. In determining the payment to be required from the applicant, the Lead Agency shall consider the in-kind value of project design or expenditures intended to permit any or all important archaeological resources or California Native American culturally significant sites to be undisturbed or preserved in place.

a. Consideration of in-kind values does not require a dollar for dollar set-off against the payment by the project applicant.

b. In deciding on an appropriate set-off, the Lead Agency shall consider such factors as whether the project design or expenditures would provide other benefits to the applicant and whether the design or expenditures required special changes in the project plans.

2. When it decides to carry out or approve the project, the Lead Agency shall, if necessary, reduce the mitigation measures specified in the EIR to those which can be funded with:

a. The money guaranteed by the project applicant, and

b. Money voluntarily guaranteed by any other person or persons for the mitigation.

3. In order to allow time for interested persons to provide a voluntary funding guarantee, the Lead Agency shall not decide to carry out or approve a project having a significant effect on important archaeological resources until 60 days after completing the final EIR on the project.

4. In no event shall the Lead Agency require the applicant to pay more for mitigation within the site of the project than the following amounts:

a. One half of one percent of the projected cost of the project, if the project is a commercial or industrial project.

b. Three fourths of one percent of the projected cost of the project for a housing project consisting of one unit.

- c. If a housing project consists of more than one unit, three fourths of one percent of the projected cost of the first unit plus the sum of the following:
 - (i) \$200 per unit for any of the next 99 units,
 - (ii) \$150 per unit for any of the next 400 units,
 - (iii) \$100 per unit for units in excess of 500.
- B. Unless special or unusual circumstances warrant an exception, the field excavation phase of an approved mitigation plan shall be completed within 90 days after the applicant receives the final approval necessary to begin physical development of the project.
 - 1. With a phased project, the mitigation measures shall be completed within 90 days after approval is granted for the phased portion to which the specific mitigation measures apply.
 - 2. The project applicant can elect to extend the time limits for completing the field excavation phase of the approved mitigation plan.
 - 3. A mitigation plan shall not authorize violation of any law protecting American Indian cemeteries.
- C. Excavation as part of a mitigation plan shall be restricted to those parts of an important archaeological resource that would be damaged or destroyed by the project unless special circumstances require limited excavation of an immediately adjacent area in order to develop important information about the part of the resource that would be destroyed.
- D. Excavation as mitigation shall not be required for an important archaeological resource if the Lead Agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the resource, provided that the determination is documented in the EIR.
- E. The limitations on mitigation shall not apply to:
 - 1. A public project if the Lead Agency decides to comply with other provisions of CEQA that apply to mitigation of significant effects, and
 - 2. A private project if the applicant and the Lead Agency jointly elect to comply with other provisions of CEQA that apply to mitigation of significant effects.
- F. The time and cost limitations described in this section do not apply to surveys and site evaluation activities intended to determine whether the project location contains archaeological resources, and if so, whether the archaeological resources are important as defined in this appendix.

VIII. Discovery of Human Remains

A. In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

1. The coroner of the county in which the remains are discovered has been informed and has determined that no investigation of the cause of death is required, and

2. If remains are of Native American origin,

a. The descendants from the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or

b. The Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission.

B. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.

1. The Native American Heritage Commission is unable to identify a descendant;

2. The descendant identified fails to make a recommendation; or

3. The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

C. If the human remains are discovered before the Lead Agency has finished the CEQA process, the Lead Agency shall work with the Native American Heritage Commission and the applicant to develop an agreement for treating or disposing, with appropriate dignity, of the human remains and any associated grave goods. Action implementing such an agreement is exempt from:

1. The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).

2. The requirements of CEQA and the Coastal Act.

IX. As part of the objectives, criteria, and procedures required by Section 21082 or as part of conditions imposed for mitigation, a Lead Agency should make provisions for archaeological sites accidentally discovered

during construction. These provisions should include an immediate evaluation of the find. If the find is determined to be an important archaeological resource, contingency funding and a time allotment sufficient to allow recovering an archaeological sample or to employ one of the avoidance measures should be available. Construction work could continue on other parts of the building site while archaeological mitigation takes place.

Note:

Authority cited: Sections 21083 and 21087, Public Resources Code; Reference: Section 7050.5, Health and Safety Code; Sections 5097.98, 21001(b) and (c), and 21083.2, Public Resources Code; Society for California Archaeology v. County of Butte, (1977) 65 Cal. App. 3d 832.

Discussion:

This appendix responds to problems that have arisen in applying CEQA to archaeological resources. In some areas of the state, full excavations of archaeological sites have been required for nearly every site discovered within the tract where a project would be located regardless of the importance of the sites. As a result, federal officials have noted that in CEQA documents they have found descriptions of archaeological excavations of sites that would not be regarded as important enough to call for excavation under federal law. This experience has shown a need for establishing standards to guide agencies in deciding whether a site would be important enough to call for analysis under CEQA.

While there have been problems in some parts of the state, archaeological impacts have been handled well in other areas. Mendocino County and Santa Barbara County especially have been noted for the excellence of their methods for dealing with archaeological resources. This appendix does not mandate a uniform system statewide so that successful local programs can continue.

The unnecessarily large number of excavations has also involved an unnecessary conflict with Native American values. Native Americans have been upset by people digging up the remains of their ancestors. While archaeology can be carried out in conjunction with Native Americans, and has been done successfully to help Native Americans learn about their ancestors, too often excavations have been carried out without concern for the sensitivities of Native Americans. The approaches described in this appendix should reduce the conflict with Native American values concerning protection of burial sites.

An important principle in this appendix is the emphasis on avoidance of archaeological sites. Avoidance is discussed as a way of avoiding a significant impact in the first place, thereby enabling a project to qualify for a Negative Declaration. Where the proposed project includes a potential impact on a site, avoidance is suggested as a preferred mitigation measure where all other factors are equal. If a project can be altered to avoid a site, the costs and delays involved in an archaeological excavation may also be avoided, and there would be no interference with Native American sensitivities. Possible methods of avoidance are listed in order to give people ideas of how to proceed. These methods are not exclusive and could be supplemented by other methods at the option of the Lead Agency.

The appendix also identifies standards for determining the importance of the archaeological site and provides that a project would have a significant effect on the environment if it would cause damage to an important archaeological site. These standards are in keeping with the efforts in CEQA to focus on significant effects rather than on all effects. The standards are an effort to focus on archaeological resources that people would generally agree are important rather than requiring protection of all archaeological resources. The standards are consistent with the standards included in AB 952 (Deddeh), Chapter 1623 of the Statutes of 1982. The appendix uses the term "important" archaeological resources rather than "unique" archaeological resources in order to use terminology more closely related to accepted scientific usage. The substance of the standards remains consistent with the bill despite the change in label.

The appendix encourages the preparation of an excavation plan in an EIR as one of several possible mitigation measures for destruction or damage to an archaeological site. The excavation plan is an effort to achieve greater precision in the ways in which any necessary excavation would be carried out. The excavation plan would put a burden on the archaeologist to explain the importance of the site and to demonstrate how the proposed excavation would serve some public interest. The elements listed for an excavation plan are suggested but not required. This approach allows Lead Agencies to take various approaches in excavation plans. The plans are intended to shift the burden to the archaeologist to demonstrate the necessity for an excavation rather than requiring a staff worker in the Lead Agency to deal with unfocused claims of the importance of the site. The Resources Agency has received information suggesting that planners working for Lead Agencies have had difficulty in evaluating claims from expert archaeologists demanding that excavation be allowed. The excavation plan requirement is designed to alleviate that problem.

To conform to the recently enacted Assembly Bill 952, Chapter 1623 of the Statutes of 1982, the appendix identifies various restrictions on archaeological mitigation and cost limitations on archaeological mitigation. These restrictions apply to the CEQA process, and people implementing the Act need to be made aware of them. The appendix reorganizes and clarifies the limitations and adds interpretations with a few subjects from the bill such as offsets and the 60-day delay in approval after completing the EIR.

The appendix also suggests ways for Lead Agencies to standardize their methods of dealing with archaeological resources. The methods could be included within mitigation measures in EIRs or included in the CEQA procedures which an agency is required to adopt by Section 21082 of the Public Resources Code. The appendix also encourages Lead Agencies to deal with the problem of unexpected sites which may be discovered during construction. The appendix does not mandate any particular way to deal with this situation.

The appendix also reflects the protections recently enacted in Senate Bill 297 (Garamendi), Chapter 1492 of the Statutes of 1982, for human remains discovered during excavation. If the human remains are of Native American origin, special rules and procedures apply. The rules and procedures are included here because they are so closely related to the archaeological activities discussed in this appendix.

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APPENDIX H:
SUPPLEMENTAL VISUAL ANALYSIS DATA

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APPENDIX I:
SUPPLEMENTAL AIR QUALITY DATA

APPENDIX J:

SUPPLEMENTAL PUBLIC HEALTH AND SAFETY DATA

r = Indicates revised line; i.e., revision to Draft EIR made in response to public comment.

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APPENDIX K: CEQA STANDARDS FOR EIR ADEQUACY

According to Section 15151 of the CEQA Guidelines, the standards for Adequacy of an EIR are as follows:

An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.

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APPENDIX L:

CEQA DEFINITION OF "MITIGATION"

According to Section 15370 of the CEQA EIR Guidelines, the term "mitigation" includes:

- (a) Avoiding the impact altogether by not taking a certain action or parts of an action.
- (b) Minimizing impacts by limiting the degree of magnitude of the action and its implementation.
- (c) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.
- (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- (e) Compensating for the impacts by replacing or providing substitute resources or environments.

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FINAL EIR APPENDICES

APPENDIX A

ANALYSIS OF TRAFFIC SERVICE OBJECTIVES

Analysis of Traffic Service Objectives Cowell Ranch Project

In May 1995, the TRANSPLAN Committee revised the Traffic Service Objectives (TSO) for incorporation into the East County Action Plan. The revised Action Plan Traffic Service Objectives are shown in Table 1.

There are three types of Traffic Service Objectives identified in Table 1:

- Delay Index
- Level of Service
- Vehicle Occupancy

The Traffic Service Objectives identified a Delay Index for each of the routes of regional significance. The Delay Index is the ratio of actual travel time on a route divided by the free flow travel time. While existing travel time and delay can be measured directly, it is necessary to use computer model outputs to estimate travel time in the AM and PM peak periods and compare them to free flow travel time for future conditions.

Tables 2 - 5 describe the estimated delay index for both 2010 and 2026 with and without the Cowell Ranch project. It should be noted that the delay index tables do not assume any mitigations. The only suburban arterial route that appears to exceed the delay index objective is the relatively short 2½ mile Buchanan Road Bypass between Kirker Pass Road and Somersville Road. This roadway segment, which was analyzed as a two-lane facility, would not exceed the desired TSO delay index if it were a four-lane roadway.

Level of service objectives are described for a number of arterials in the East County. Those level of service objectives are based on intersections in the developed portion of the County and for roadway segments in the rural portion of the County. There are a number of roadways and intersections analyzed in the Cowell Ranch Project EIR. Those elements for which TSOs are identified and that were analyzed in the Cowell Ranch EIR are summarized in Table 6.

Intersections on the arterials identified for TSO analyses generally satisfy the LOS standards in the traffic service objectives, when mitigated as recommended in the Cowell Ranch EIR, as shown in Table 6A. However, there are a few intersections that did not require mitigation for the EIR that do not satisfy the TSO. These are noted with possible mitigations to satisfy the TSO.

Table 6B identifies several rural roadways that do not meet the TSO peak hour demand threshold. These roadways include State Route 4 south of Balfour Road, Byron Highway, and Deer Valley Road (north of Balfour Road). The Cowell Ranch EIR recommends widening these to four lanes to mitigate future travel congestion. If these roadways are widened the TSO peak hour demand thresholds and LOS would be satisfied.

Table 1
Action Plan Traffic Service Objectives
Revisions: May 12, 1995

Regional Route	Traffic Service Objective	Schedule to Achieve	Peak Hour* Demand Threshold
SR 4 Freeway (including SR 4 Bypass Expressway)	. Morning Peak Hour Vehicle Occupancy 1.25 or higher . Delay Index less than 3.0	2010	n/a
SR 4 Non-Freeway . SR 160 to Balfour Road	. LOS D or better at signalized intersections . LOS E or better at unsignalized intersections . Delay Index less than 3.0	2010	varies ^b
SR 4 Non-Freeway . Balfour Road to San Joaquin County Line	. LOS E or better calculated for rural highways . Delay Index less than 2.0	2010	2,100
Vasco Road ^c	. Pk. Hr. Vehicle Occupancy 1.3 or higher . Delay Index less than 3.0	2010	n/a
Byron Highway	. LOS mid E or better (rural highway) . Delay Index less than 3.0	2010	1,570
Marsh Creek Road (east of Deer Valley Road) Camino Diablo Road Deer Valley Road (rural portion)	. LOS mid E or better . Delay Index less than 2.0	2010	1,200 1,200 1,300
Kirker Pass Road	. LOS mid E or better . Delay Index less than 2.0	2010	2,520
Suburban Arterial Routes ^d	. Intersection LOS mid D or better . Delay Index less than 2.0	2010	varies ^b

Notes:

- a. Volumes are the total of both directions.
- b. The notation "varies" indicates that the threshold will depend on specific conditions at particular intersections.
- c. Threshold assumes the Vasco Road relocation project is completed.
- d. Includes the following roads: Lone Tree Way, Railroad Avenue, Leland Road, Delta Fair Boulevard, Buchanan Road, Somersville Road, Hillcrest Avenue, Deer Valley Road (northern portion), Walnut Boulevard, Willow Pass Road, Bailey Road (north of Leland), Evora Road, and the Buchanan Road Bypass (future route).

Source: DKS Associates

Table 2
Traffic Service Objectives
Delay Index
No Project - Year 2010 Conditions

Regional Route	Traffic Service Delay Index	Peak Direction Delay Index		Peak Direction Travel Time (Min)		Free Flow Travel Time (Min)
		AM	PM	AM	PM	
State Route 4						
Willow Pass - Lone Tree Way	<3	2.1	2.2	25.06	25.73	11.78
Lone Tree Way - SR 4 Bypass		1.6	1.8	4.15	4.69	2.56
State Route 4 Bypass						
State Route 4 - Walnut	<3	1.6	1.8	14.29	14.93	8.71/ 8.51
State Route 4 Non-Freeway						
SR 160 - Balfour	<3	1.0	1.0	19.2	19.27	18.77
State Route 4 Non-Freeway						
Balfour - County Line	<2	1.3	1.3	15.38	14.76	11.41
Vasco Road						
Walnut - County Line	<3	1.8	1.9	12.20	12.54	6.72
Byron Highway						
Delta Rd - County Line	<3	1.3	1.4	15.26	16.30	11.89
Marsh Creek Rd						
Deer Valley Rd - Bixler	<2	1.0	1.0	14.45	14.21	13.97
Camino Diablo						
Marsh Creek - Byron Hwy	<2	1.1	1.2	8.12	8.98	7.32
Deer Valley Rd						
Lone Tree - Marsh Creek	<2	1.1	1.2	11.37	12.39	10.08
Kirker Pass Rd						
Buchanan Rd - Concord Ave	<2	1.4	1.2	11.96	9.99	8.67

Source: DKS Associates

Table 2 (continued)
Traffic Service Objectives
Delay Index
No Project - Year 2010 Conditions

Suburban Arterial Route	Traffic Service Delay Index	Peak Direction Delay Index		Peak Direction Travel Time (Min)		Free Flow Travel Time (Min)
		AM	PM	AM	PM	
Lone Tree Way SR 4 - Delta Rd	<2	1.1	1.1	15.34	15.87	14.04
Railroad Ave Buchanan - 3rd St	<2	1.0	1.0	4.94	5.02	4.82
Leland Rd Bailey Rd - Standard Oil Ave	<2	1.5	1.4	15.35	14.2	10.06
Delta Fair Blvd Standard Oil Ave - Buchanan	<2	1.4	1.8	3.43	4.40	2.40
Buchanan Rd Railroad Ave - Contra Loma Blvd	<2	1.6	1.6	12.48	13.12	8.04
Somersville Rd 4th St - James Donlon Blvd	<2	1.0	1.0	6.23	6.31	6.10
Hillcrest Ave 18th St - Lone Tree Way	<2	1.0	1.0	7.81	7.94	7.64
Deer Valley Rd Davison Dr - Lone Tree Way	<2	1.0	1.0	3.75	3.82	3.70
Walnut Blvd Dainty Ave - Camino Diablo	<2	1.0	1.0	7.43	7.44	7.51
Willow Pass Rd SR 4 - Beacon St	<2	1.1	1.1	6.56	6.34	5.79
Bailey Rd Willow Pass Rd - Leland Rd	<2	1.0	1.2	2.03	2.26	1.96
Evora Rd Willow Pass - Willow Pass	<2	1.0	1.0	7.00	7.00	7.00
Buchanan Rd Bypass* Kirker Pass - Somersville Rd	<2	3.3	3.0	9.19	8.35	2.80

Note:

a. Would have a delay of less than 2 if widened to four lanes.

Source: DKS Associates

Table 3
Traffic Service Objectives
Delay Index
Cowell Ranch Project - Year 2010 Conditions

Regional Route	Traffic Service Delay Index	Peak Direction Delay Index		Peak Direction Travel Time (Min)		Free Flow Travel Time (Min)
		AM	PM	AM	PM	
State Route 4 Willow Pass - Lone Tree Way Lone Tree Way - SR 4 Bypass	<3	2.3 1.7	2.6 1.9	26.98 4.30	30.62 4.95	11.78 2.56
State Route 4 Bypass State Route 4 - Walnut	<3	1.6	1.9	14.33	16.03	8.71/ 8.51
State Route 4 Non-Freeway SR 160 - Balfour	<3	1.0	1.0	19.15	19.30	18.77
State Route 4 Non-Freeway Balfour - County Line	<2	1.4	1.3	15.84	15.23	11.41
Vasco Road Walnut - County Line	<3	1.8	2.0	11.91	13.55	6.72
Byron Highway Delta Rd - County Line	<3	1.1	1.4	13.58	17.09	11.89
Marsh Creek Rd Deer Valley Rd - Bixler	<2	1.1	1.1	14.75	14.64	13.97
Camino Diablo Marsh Creek - Byron Hwy	<2	1.1	1.4	8.33	10.60	7.32
Deer Valley Rd Lone Tree - Marsh Creek	<2	1.1	1.3	11.42	12.72	10.08
Kirker Pass Rd Buchanan Rd - Concord Ave	<2	1.3	1.1	11.68	9.87	8.67

Source: DKS Associates

Table 3 (continued)
Traffic Service Objectives
Delay Index
Cowell Ranch Project - Year 2010 Conditions

Suburban Arterial Route	Traffic Service Delay Index	Peak Direction Delay Index		Peak Direction Travel Time (Min)		Free Flow Travel Time (Min)
		AM	PM	AM	PM	
Lone Tree Way SR 4 - Delta Rd	<2	1.1	1.1	15.20	15.92	14.04
Railroad Ave Buchanan - 3rd St	<2	1.0	1.0	4.96	5.00	4.82
Leland Rd Bailey Rd - Standard Oil Ave	<2	1.4	1.4	13.89	13.96	10.06
Delta Fair Blvd Standard Oil Ave - Buchanan	<2	1.3	1.4	3.23	3.35	2.40
Buchanan Rd Railroad Ave - Contra Loma Blvd	<2	1.5	1.8	12.36	14.12	8.04
Somersville Rd 4th St - James Donlon Blvd	<2	1.0	1.0	6.30	6.26	6.10
Hillcrest Ave 18th St - Lone Tree Way	<2	1.0	1.0	7.79	7.96	7.64
Deer Valley Rd Davison Dr - Lone Tree Way	<2	1.0	1.0	3.74	3.85	3.70
Walnut Blvd Dainty Ave - Camino Diablo	<2	1.0	1.0	7.69	7.74	7.51
Willow Pass Rd SR 4 - Beacon St	<2	1.2	1.1	6.70	6.34	5.79
Bailey Rd Willow Pass Rd - Leland Rd	<2	1.0	1.2	2.04	2.29	1.96
Evora Rd Willow Pass - Willow Pass	<2	1.0	1.0	7.00	7.00	7.00
Buchanan Rd Bypass* Kirker Pass - Somersville Rd	<2	3.0	2.6	8.30	7.20	2.80

Note:

a. Would have a delay of less than 2 if widened to four lanes.

Source: DKS Associates

**Table 4
Traffic Service Objectives
Delay Index
No Project - Year 2026 Conditions**

Regional Route	Traffic Service Delay Index	Peak Direction Delay Index		Peak Direction Travel Time (Min)		Free Flow Travel Time (Min)
		AM	PM	AM	PM	
State Route 4 Willow Pass - Lone Tree Way Lone Tree Way - SR 4 Bypass	<3	1.9 1.4	1.8 1.4	22.32 3.46	20.96 3.71	11.78 2.56
State Route 4 Bypass State Route 4 - Walnut	<3	1.4	1.4	13.74	13.30	9.67/ 9.46
State Route 4 Non-Freeway SR 160 - Balfour	<3	1.1	1.1	19.76	19.91	18.77
State Route 4 Non-Freeway Balfour - County Line	<2	1.4	1.3	15.56	15.23	11.41
Vasco Road Walnut - County Line	<3	2.0	2.0	13.46	13.37	6.72
Byron Highway Cypress Rd - County Line	<3	1.4	1.4	19.47	18.86	13.69
Marsh Creek Rd Deer Valley Rd - Bixler	<2	1.1	1.0	14.21	18.86 13.78	13.15
Camino Diablo Marsh Creek - Byron Hwy	<2	1.2	1.3	8.88	9.15	7.32
Deer Valley Rd Lone Tree - Marsh Creek	<2	1.1	1.2	10.75	11.70	10.08
Kirker Pass Rd Buchanan Rd - Concord Ave	<2	1.5	1.2	13.05	10.08	8.67

Source: DKS Associates

Table 4 (continued)
Traffic Service Objectives
Delay Index
No Project - Year 2026 Conditions

Suburban Arterial Route	Traffic Service Delay Index	Peak Direction Delay Index		Peak Direction Travel Time (Min)		Free Flow Travel Time (Min)
		AM	PM	AM	PM	
Lone Tree Way SR 4 - Delta Rd	<2	1.1	1.1	17.14	17.16	15.94
Railroad Ave Buchanan - 3rd St	<2	1.0	1.1	5.01	5.35	4.82
Leland Rd Bailey Rd - Standard Oil Ave	<2	1.2	1.3	12.13	13.10	10.06
Delta Fair Blvd Standard Oil Ave - Buchanan	<2	1.2	1.2	2.82	2.91	2.40
Buchanan Rd Railroad Ave - Contra Loma Blvd	<2	1.4	1.4	11.16	11.28	8.04
Somersville Rd 4th St - James Donlon Blvd	<2	1.0	1.0	6.18	6.3	6.10
Hillcrest Ave 18th St - Lone Tree Way	<2	1.0	1.0	7.89	7.91	7.64
Deer Valley Rd Davison Dr - Lone Tree Way	<2	1.0	1.0	3.75	3.86	3.70
Walnut Blvd Dainty Ave - Camino Diablo	<2	1.1	1.2	7.46	7.54	6.49
Willow Pass Rd SR 4 - Beacon St	<2	1.1	1.1	6.19	6.31	5.79
Bailey Rd Willow Pass Rd - Leland Rd	<2	1.0	1.1	1.98	2.14	1.96
Evora Rd Willow Pass - Willow Pass	<2	1.0	1.0	7.00	7.01	7.00
Buchanan Rd Bypass* Kirker Pass - Somersville Rd	<2	2.8	2.4	7.74	6.79	2.80

Note:

a. Would have a delay of less than 2 if widened to four lanes.

Source: DKS Associates

Table 5
Traffic Service Objectives
Delay Index
Cowell Ranch Project - Year 2026 Conditions

Regional Route	Traffic Service Delay Index	Peak Direction Delay Index		Peak Direction Travel Time (Min)		Free Flow Travel Time (Min)
		AM	PM	AM	PM	
State Route 4						
Willow Pass - Lone Tree Way	<3	2.0	1.9	23.10	22.83	11.78
Lone Tree Way - SR 4 Bypass		1.3	1.3	3.45	3.65	2.56
State Route 4 Bypass						
State Route 4 - Walnut	<3	1.5	1.5	14.74	13.90	9.67/ 9.46
State Route 4 Non-Freeway						
SR 160 - Balfour	<3	1.1	1.1	19.91	19.90	18.77
State Route 4 Non-Freeway						
Balfour - County Line	<2	1.4	1.4	16.23	16.08	11.41
Vasco Road						
Walnut - County Line	<3	1.9	1.2	12.86	8.12	6.72
Byron Highway						
Cypress Rd - County Line	<3	1.4	1.4	18.69	19.17	13.69
Marsh Creek Rd						
Deer Valley Rd - Bixler	<2	1.1	1.1	17.31	16.96 11.19	15.30
Camino Diablo						
Marsh Creek - Byron Hwy	<2	1.3	1.3	9.27	9.15	7.32
Deer Valley Rd						
Lone Tree - Marsh Creek	<2	1.1	1.2	10.96	12.10	10.08
Kirker Pass Rd						
Buchanan Rd - Concord Ave	<2	1.3	1.2	11.63	10.34	8.67

Source: DKS Associates

Table 5 (continued)
Traffic Service Objectives
Delay Index
Cowell Ranch Project - Year 2026 Conditions

Suburban Arterial Route	Traffic Service Delay Index	Peak Direction Delay Index		Peak Direction Travel Time (Min)		Free Flow Travel Time (Min)
		AM	PM	AM	PM	
Lone Tree Way SR 4 - Delta Rd	<2	1.1	1.1	17.34	17.41	15.94
Railroad Ave Buchanan - 3rd St	<2	1.0	1.1	5.02	5.43	4.82
Leland Rd Bailey Rd - Standard Oil Ave	<2	1.2	1.3	11.77	13.40	10.06
Delta Fair Blvd Standard Oil Ave - Buchanan	<2	1.2	1.3	2.77	3.00	2.40
Buchanan Rd Railroad Ave - Contra Loma Blvd	<2	1.2	1.4	9.93	11.23	8.04
Somersville Rd 4th St - James Donlon Blvd	<2	1.0	1.0	6.17	6.32	6.10
Hillcrest Ave 18th St - Lone Tree Way	<2	1.0	1.0	7.87	7.93	7.64
Deer Valley Rd Davison Dr - Lone Tree Way	<2	1.0	1.0	3.75	3.87	3.70
Walnut Blvd Dainty Ave - Camino Diablo	<2	1.1	1.1	8.09	8.03	7.51
Willow Pass Rd SR 4 - Beacon St	<2	1.1	1.1	6.11	6.30	5.79
Bailey Rd Willow Pass Rd - Leland Rd	<2	1.0	1.1	1.98	2.16	1.96
Evora Rd Willow Pass - Willow Pass	<2	1.0	1.0	7.00	7.00	7.00
Buchanan Rd Bypass ^a Kirker Pass - Somersville Rd	<2	2.9	2.8	8.08	7.72	2.80

Note:

a. Would have a delay of less than 2 if widened to four lanes.

Source: DKS Associates

Table 6A
Traffic Service Objectives
Intersection Level of Service
Cowell Ranch Project

Intersection	Traffic Service Objective	2010				2026			
		AM		PM		AM		PM	
		without project	with project	without project	with project	without project	with project	without project	with project
State Route 4 and									
West Sand Creek Rd	LOS D	0.28 A	0.28 A	0.40 A	0.44 A	0.27 A	0.30 A	0.49 A	0.48 A
Second St	LOS D	0.32 A	0.33 A	0.46 A	0.46 A	0.40 A	0.40 A	0.56 A	0.56 A
Balfour Rd	LOS D	0.33 A	0.31 A	0.54 A	0.55 A	0.29 A	0.34 A	0.42 A	0.45 A
Lone Tree Way and									
SR 4 WB Ramp	LOS mid D	0.71 C	0.72 C	0.69 B	0.67 B	0.86 D	0.89 D	0.82 D	0.84 D
Mitigated							0.65 D ^a		
SR 4 EB Ramp	LOS mid D	0.59 A	0.60 A	0.84 D	0.81 D	0.69 B	0.70 B	1.00 E	1.03 F
Mitigated		-	-	-	-	-	0.58 A ^b	-	0.76 C ^b
James Donlon	LOS mid D	0.85 D	0.79 C	1.05 F	1.04 F	0.77 C	0.72 C	0.99 E	1.01 F
Mitigated		-	-	-	0.83 D ^c	-	0.66 B ^c	-	0.86 D ^c
Deer Valley Rd	LOS mid D	0.90 D	0.90 D	1.08 F	1.08 F	0.75 C	0.78 C	1.01 F	1.04 F
Mitigated		-	-	-	0.86 D ^d	-	0.70 B ^d	-	0.82 D ^d

Notes:

- a. Added second NB left-turn lane
- b. Added second EB right-turn lane
- c. Intersection modified to provide free EB right-turn lane
- d. Added exclusive EB right-turn lane, exclusive WB right-turn lane, and second SB left-turn lane

Source: DKS Associates

Table 6A (Continued)
Traffic Service Objectives
Intersection Level of Service
Cowell Ranch Project

Intersection	Traffic Service Objective	2010				2026			
		AM		PM		AM		PM	
		without project	with project	without project	with project	without project	with project	without project	with project
Lone Tree Way and									
Hillcrest	LOS mid D	0.88 D	0.85 D	1.08 F	1.10 F	0.79 C	0.80 C	0.89 D	0.94 E
Mitigated		-	0.74 C ^a	-	0.84 D ^a	-	0.69 B ^a	-	0.72 C ^a
SR 4 Bypass SB	LOS mid D	1.08 F	1.09 F	1.24 F	1.25 F	0.45 A	0.41 A	0.68 B	0.70 B
Mitigated		-	0.77 C ^b	-	0.82 D ^b	-	-	-	-
SR 4 Bypass NB		-	-	-	-	0.57 A	0.47 A	0.60 A	0.62 B
Empire	LOS mid D	0.73 C	0.78 C	0.76 C	0.81 D	0.77 C	0.74 C	0.59 A	0.63 B
Fairview	LOS mid D	0.81 D	0.83 D	0.91 E	0.94 E	0.73 C	0.70 B	0.88 D	0.90 D
Mitigated		-	0.66 B ^c	-	0.77 C ^c	-	-	-	0.71 C ^c
Ohara	LOS mid D	0.79 C	0.79 C	0.90 D	0.88 D	0.89 D	0.92 E	0.95 E	0.99 E
Mitigated	-	-	-	-	0.71 C ^d	-	0.81 D ^d	-	0.71 C ^d

Notes:

- a. Converted WB shared through/right-turn lane to exclusive right-turn lane
 Converted WB exclusive left-turn lane to a shared through/left-turn lane
 Added second EB left-turn lane
- b. Added second exclusive NB through lane
 Added third SB through lane
 Added second EB left-turn lane
 Added third exclusive WB through lane
- c. Added second NB left-turn lane
- d. Added second EB left-turn lane

Source: DKS Associates

Table 6A (Continued)
Traffic Service Objectives
Intersection Level of Service
Cowell Ranch Project

Intersection	Traffic Service Objective	2010				2026			
		AM		PM		AM		PM	
		without project	with project	without project	with project	without project	with project	without project	with project
Hillcrest and									
SR 4 WB Ramps	LOS mid D	0.64 B	0.63 B	0.81 D	0.83 D	0.67 B	0.66 B	0.77 C	0.78 C
SR 4 EB Ramps	LOS mid D	0.77 C	0.77 C	0.84 D	0.87 D	0.78 C	0.79 C	0.97 E	0.98 E
Mitigated		-	-	-	0.76 C ^a	-	0.63 B ^a	-	0.84 D ^a
Deer Valley Rd	LOS mid D	0.61 B	0.60 A	0.82 D	0.81 D	0.66 B	0.65 B	0.78 C	0.78 C
Lone Tree Way	LOS mid D	0.88 D	0.85 D	1.08 F	1.10 F	0.60 A	0.63 B	0.67 B	0.69 B
Mitigated		-	0.74 C ^b	-	0.84 D ^b	-	0.69 B ^b	-	0.72 C ^b
Sand Creek Rd	LOS mid D	0.05 A	0.05 A	0.11 A	0.13 A	0.05 A	0.06 A	0.08 A	0.10 A
Deer Valley Rd and									
Hillcrest	LOS mid D	0.61 B	0.60 A	0.82 D	0.81 D	0.66 B	0.65 B	0.78 C	0.78 C
Lone Tree Way	LOS mid D	0.90 D	0.90 D	1.08 F	1.08 F	0.75 C	0.78 C	1.01 F	1.04 F
Mitigated		-	-	-	0.86 D ^c	-	0.70 B ^c	-	0.82 D ^c
Sand Creek	LOS mid D	0.64 B	0.65 B	0.53 A	0.54 A	0.60 A	0.63 B	0.67 B	0.69 B
Balfour	LOS mid D	0.41 A	0.44 A	0.44 A	0.46 A	0.30 A	0.33 A	0.35 A	0.40 A

Notes:

- a. Added third NB through lane
- b. Converted WB shared through/right-turn lane to exclusive right-turn lane
 Converted WB exclusive left-turn lane to shared through/left-turn lane
 Added second EB left-turn lane
- c. Added exclusive EB right-turn lane, exclusive WB right-turn lane, and second SB left-turn lane.

Table 6A (Continued)
Traffic Service Objectives
Intersection Level of Service
Cowell Ranch Project

Intersection	Traffic Service Objective	2010				2026			
		AM		PM		AM		PM	
		without project	with project	without project	with project	without project	with project	without project	with project
Walnut and									
Balfour	LOS mid D	0.50 A	0.55 A	0.65 B	0.71 C	0.62 B	0.71 D	0.87 D	0.91 E
Mitigated		-	-	-	-	-	0.60 A ^a	-	0.80 C ^a
Payne	LOS mid D	0.09 A	0.16 A	0.11 A	0.20 A	0.10 A	0.22 A	0.16 A	0.27 A
Concord	LOS mid D	0.18 A	0.38 A	0.17 A	0.31 A	0.26 A	0.41 A	0.29 A	0.38 A
Marsh Creek	LOS mid D	0.55 A	0.81 D	0.56 A	0.86 D	0.58 A	1.04 F	0.66 B	0.93 E
Mitigated	-	-	-	-	-	-	0.86 D ^b	-	0.77 C ^b
Business Pkwy	LOS mid D	0.10 A	0.72 C	0.10 A	0.66 B	0.13 A	0.72 C	0.15 A	0.75 C
Vasco	LOS mid D	0.90 D	1.02 F	0.88 D	1.06 F	0.93 E	0.96 E	0.93 E	1.00 E
Mitigated		-	0.64 B ^c	-	0.81 D ^c	-	0.61 B ^c	-	0.74 C ^c
Cowell Pkwy	LOS mid D	-	0.42 A	-	0.81 D	-	0.30 A	-	0.47 A
Camino Diablo	LOS mid D	0.24 A	0.19 A	0.12 A	0.22 A	0.30 A	0.51 A	0.23 A	0.49 A

Notes:

- a. Converted shared EB through/right-turn lane to exclusive through lane
Added exclusive right-turn lane
- b. Converted NB shared through/right-turn lane to second exclusive through lane
Added NB exclusive right-turn lane
Added second WB left-turn lane
- c. Added second EB through lane
Added second WB through lane

Source: DKS Associates

Table 6B
Traffic Service Objectives
Rural Roadway Level of Service
Cowell Ranch Project

Projected Peak Hour Volume / Does Volume Meet TSO																		
Road Segment	Traffic Service Objective	TSO Peak Hour Demand Threshold	2010								2026							
			AM				PM				AM				PM			
			without project		with project		without project		with project		without project		with project		without project		with project	
			Peak Hour Vol.	TSO Met	Peak Hour Vol.	TSO Met	Peak Hour Vol.	TSO Met	Peak Hour Vol.	TSO Met	Peak Hour Vol.	TSO Met	Peak Hour Vol.	TSO Met	Peak Hour Vol.	TSO Met	Peak Hour Vol.	TSO Met
SR 4 Non-Freeway Balfour Rd - County Line	LOS E	2,100 ^a	2010	Yes	2061	Yes	2108	No ^c	2159	No ^c	1987	Yes	2117	No ^c	2122	No ^c	2254	No ^c
Byron Highway	LOS mid E	1,570 ^a	1736	No ^c	1674	No ^c	1731	No ^c	1571	No ^c	2004	No ^c	2071	No ^c	2106	No ^c	2161	No ^c
Marsh Creek Rd	LOS mid E	1,200 ^a	624	Yes	672	Yes	570	Yes	629	Yes	663	Yes	648	Yes	609	Yes	617	Yes
Camino Diablo Rd	LOS mid E	1,200 ^a	882	Yes	896	Yes	1054	Yes	1069	Yes	709	Yes	734	Yes	735	Yes	726	Yes
Deer Valley Rd	LOS mid E	1,300 ^a	1163	Yes	1215	Yes	1350	No ^c	1430	No ^c	832	Yes	940	Yes	998	Yes	1127	Yes
Kirker Pass Rd	LOS mid E	2,520 ^b	2453	Yes	2525	No	2213	Yes	2160	Yes	2644	No	2500	Yes	2223	Yes	2277	Yes
Notes: a. Volume is total for both directions b. Volume is for peak direction c. Mitigated by widening to four lanes — Traffic Service Objective met when widened Source: DKS Associates																		

A third Traffic Service Objective called out for State Route 4 and Vasco Road concerns peak hour vehicle occupancy. The Traffic Service Objective for State Route 4 Freeway includes a morning peak hour vehicle occupancy of 1.25 or higher. The Traffic Service Objective for Vasco Road calls for a peak hour vehicle occupancy of 1.3 or higher.

The travel model provides estimates of HOV and SOV traffic volumes in the peak hour where there are HOV lanes. However, since Vasco Road does not have HOV lanes, the travel model does not provide vehicle occupancy detail.

The TRANSPLAN Action Plan indicates that periodic vehicle occupancy surveys will be taken to determine if the TSO is being achieved.

Table 7 summarizes vehicle occupancy estimates. The estimated peak hour vehicle occupancy on State Route 4 appears to satisfy the TSO in 2010 but may not in 2026.

Table 7 Vehicle Occupancy TSO					
	Traffic Service Objective Morning Peak Hour Vehicle Occupancy	Traffic Service Objective Morning Peak Hour Vehicle Occupancy			
		2010		2026	
		without project	with project	without project	with project
State Route 4					
West of Railroad Ave	1.25	1.27	1.23	1.22	1.24
East of Railroad Ave	1.25	1.29	1.29	1.19	1.22
Vasco Road	1.3	a		a	
Note: a. Not available from model to be periodically measured under the TRANSPLAN Action Plan. Source: DKS Associates					

APPENDIX B
FINAL EIR AUTHORS

APPENDIX B. FINAL EIR CONSULTANTS

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MEMORANDUM

TO: Steve Goetz **DATE:** November 18, 1997

CC: Catherine Kutsuris

FROM: Neal Liddicoat *NL* **PROJ #:** SA1265

SUBJECT: Mitigated Alternative Traffic Analysis

As requested, we have completed an analysis of the traffic impacts associated with the "Mitigated Alternative" described in the Draft Environmental Impact Report (DEIR) for Cowell Ranch. This memorandum report documents the results of that analysis.

MITIGATED ALTERNATIVE LAND USE

As described in the DEIR, the Mitigated Alternative represents a reduction of 730 dwelling units relative to the proposed Cowell Ranch plan. Specifically, this alternative would involve the following adjustments to the proposed Cowell Ranch development:

TABLE 1
MITIGATED ALTERNATIVE LAND USE

Planning Area	No. of Dwelling Units		
	Proposed Project	Mitigated Alternative	Net Reduction
8	115	96	19
11	45	34	11
30	40	27	13
31	171	146	25
32	522	219	303
52	110	85	25
61	334	0	334
TOTAL	1,337	607	730

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APPENDIX C
SUPPLEMENTAL TRAFFIC ANALYSIS
(MITIGATED ALTERNATIVE)

ANALYSIS PROCEDURES

The analysis undertaken here involved the development of modified traffic volume forecasts for the year 2026, which represents the estimated buildout year for the Cowell Ranch project. Those estimated traffic volumes were developed using the “East County Model,” as modified by DKS Associates in the preparation of the traffic impact analysis for the Cowell Ranch DEIR. The East County Model is an *emme/2* travel demand forecasting model, which uses forecasts of key socio-economic data to estimate the volume of traffic expected in the future. The specific version of the model used in the DEIR traffic analysis was modified to allow the estimation of traffic volumes in the year 2026.

This analysis involved further modification of the East County Model to reflect the land use changes summarized above, though no other changes were made. The model was then run to provide travel demand estimates for the year 2026. Those estimates included both link-level (i.e., mid-block) traffic volumes and intersection turning movement volumes. The focus of this effort was on AM and PM peak-hour volumes (rather than daily volumes).

In considering the results of this analysis, it is important to understand that a reduction in the proposed land use will not necessarily translate to a direct reduction in peak-hour traffic volumes on all of the roadways and intersections serving the project. The reduction in residential units will, of course, result in a decrease in the overall number of trips generated by the Cowell Ranch project. However, that reduction in trips will also affect the desirability of certain travel routes in the immediate vicinity of the project. That is, as fewer trips are generated by the project, more room is available on the area’s roadway system to accommodate trips generated by other sources. The ultimate result of this is that certain of the roadways in the study area may actually experience an increase (though perhaps small) in the projected volume of traffic, particularly in the peak hours.

The resulting estimates of year 2026 intersection turning movement volumes were evaluated using the “CCTALOS” level of service calculation methodology. This is the “official” level of service calculation technique for projects within Contra Costa County and is, therefore, the method used in the Cowell Ranch DEIR. As described in the DEIR, the CCTALOS method provides a volume/capacity (V/C) ratio that indicates how much of an intersection’s theoretical capacity is needed to accommodate the existing or projected traffic demand at that location.

LEVEL OF SERVICE RESULTS

Intersection operations are defined in terms of level of service (LOS). Levels of service range from A through F, with LOS A representing optimal operations and minimal delay while LOS F indicates substantial congestion. Intersection capacity is generally considered to occur at LOS E.

The results of the level of service calculations for the 50 “primary” and 13 “secondary” study intersections are summarized in Table 2. That table indicates, for both the AM and PM peak hours, the V/C ratio and LOS for each intersection under three conditions:

- No Project,
- Full Buildout (i.e., the proposed project), and
- Mitigated Alternative.

In addition, the table presents the incremental difference in V/C ratio between the Mitigated Alternative and the Full Buildout scenario. Thus, the table allows an easy comparison to be made between the estimated intersection operations documented in the DEIR (i.e., the full buildout results) and the reduced development associated with the Mitigated Alternative.

Review of Table 2 indicates that the reduction in residential development evaluated in connection with the Mitigated Alternative generally has little or no effect on intersection operations. With a relatively small number of exceptions, the intersection V/C ratios typically change by 0.02 or less. In the AM peak hour, the incremental differences at 49 of the 63 intersections were found to fall within that range (including 8 that increased by 0.02 or less). In the PM peak hour, 48 of the study locations change by 0.02 or less, including 3 intersections having V/C ratios that increase with the Mitigated Alternative.

Table 3 summarizes the overall effect of the Mitigated Alternative in comparison to buildout of the proposed project. That table simply shows how many of the 63 study intersections fall into various categories of change in V/C ratio. For example, in the AM peak hour, 11 of the study intersections have higher V/C ratios with the Mitigated Alternative than with buildout of the proposed project. In the PM peak hour, five locations have higher V/C ratios under the Mitigated Alternative.

Eighteen of the study intersections will remain unchanged with the Mitigated Alternative in the AM peak hour and 20 will be unchanged in the PM peak hour. In terms of more substantial reductions in V/C ratio, implementation of the Mitigated Alternative would result in reductions in V/C ratio of more than 0.04 at six locations in both the AM and PM peak hour. In the AM peak hour, all six of those locations are projected to operate at LOS A regardless of scenario. Of the six intersections found to have substantial reductions in V/C ratio in the PM peak hour, three operate at LOS A under all scenarios. Of the remaining three locations, two were not found to have significant impacts (operating at LOS C or D) and one was projected to operate at LOS E under all scenarios.

**LEVEL OF SERVICE SUMMARY
COWELL RANCH MITIGATED ALTERNATIVE**

		AM Peak Hour							PM Peak Hour						
Node No.	Intersection	No Project		Full Buildout		Mitigated Alternative ⁽¹⁾			No Project		Full Buildout		Mitigated Alternative		
		V/C ⁽²⁾	LOS ⁽³⁾	V/C	LOS	V/C	LOS	V/C Diff. ⁽⁴⁾	V/C	LOS	V/C	LOS	V/C	LOS	V/C Diff.
Primary Locations															
3008	Marsh Creek Rd/Camino Diablo	0.32	A	0.25	A	0.25	A	--	0.29	A	0.24	A	0.23	A	<0.01>
3015	Deer Valley Rd/Sand Creek Rd	0.60	A	0.63	B	0.62	B	<0.01>	0.67	B	0.69	B	0.69	B	--
3026	Concord Ave/Balfour Rd	0.41	A	0.67	B	0.65	B	<0.02>	0.60	A	1.03	F	1.00	E	<0.03>
3044	Walnut Blvd/Concord Ave	0.26	A	0.41	A	0.42	A	0.01	0.29	A	0.38	A	0.35	A	<0.03>
3070	Minnesota Ave/Balfour Rd	0.30	A	0.30	A	0.30	A	--	0.38	A	0.38	A	0.38	A	--
3095	Sellers Ave/Balfour Rd	0.63	B	0.65	B	0.69	B	0.04	0.57	A	0.64	B	0.63	B	<0.01>
3117	Minnesota Ave/Central Blvd	0.23	A	0.25	A	0.25	A	--	0.35	A	0.38	A	0.37	A	<0.01>
3195	SR 4/Second Street (S)	0.40	A	0.40	A	0.40	A	--	0.56	A	0.56	A	0.56	A	--
3343	Deer Valley Rd/Lone Tree Way (S)	0.75	C	0.78	C	0.80	C	0.02	1.01	F	1.04	F	1.03	F	<0.01>
3351	Deer Valley Rd/Balfour Rd	0.30	A	0.33	A	0.34	A	0.01	0.35	A	0.40	A	0.39	A	<0.01>
3354	Lone Tree Way/James Donlon Blvd (S)	0.77	C	0.72	C	0.76	C	0.04	0.99	E	1.01	F	1.00	E	<0.01>
3486	Brentwood Blvd/Oak Ave (S)	0.34	A	0.38	A	0.37	A	<0.01>	0.55	A	0.60	A	0.60	A	--
3488	SR 4/Balfour Rd (S)	0.29	A	0.34	A	0.33	A	<0.01>	0.42	A	0.45	A	0.45	A	--
3493	Sellers Ave/SR 4	0.49	A	0.58	A	0.57	A	<0.01>	0.64	B	0.77	C	0.75	C	<0.02>
3501	Fairview Ave/Central Blvd (S)	0.26	A	0.28	A	0.28	A	--	0.38	A	0.47	A	0.46	A	<0.01>
3502	Fairview Ave/Balfour Rd	0.61	B	0.65	B	0.63	B	<0.02>	0.75	C	0.75	C	0.75	C	--
3503	Walnut Blvd/Balfour Rd (S)	0.62	B	0.71	C	0.71	C	--	0.87	D	0.91	E	0.92	E	0.01
3512	Walnut Blvd/Marsh Creek Rd (S)	0.58	A	1.04	F	1.01	F	<0.03>	0.66	B	0.93	E	0.91	E	<0.02>
3513	Walnut Blvd/Payne Ave	0.10	A	0.22	A	0.22	A	--	0.16	A	0.27	A	0.27	A	--
3521	Deer Valley Rd/Marsh Creek Rd	0.33	A	0.32	A	0.32	A	--	0.25	A	0.25	A	0.24	A	<0.01>
3525	Walnut Blvd/Camino Diablo (S)	0.30	A	0.51	A	0.35	A	<0.16>	0.23	A	0.49	A	0.38	A	<0.09>
3526	Sellers Ave/Marsh Creek Rd	0.70	B	0.83	D	0.83	D	--	0.50	A	0.68	B	0.65	B	<0.03>
3527	Walnut Blvd/Business Pkwy	0.13	A	0.72	C	0.71	C	<0.01>	0.15	A	0.75	C	0.75	C	--
3540	Byron Highway So/SR 4 (S)	0.84	D	0.87	D	0.88	D	0.01	0.61	B	0.63	B	0.63	B	--
3541	SR 4/Marsh Creek Rd	1.01	F	1.07	F	1.04	F	<0.03>	0.90	D	0.99	E	0.99	E	--
4213	Hillcrest Ave/Lone Tree Way (S)	0.79	C	0.80	C	0.79	C	<0.01>	0.89	D	0.94	E	0.93	E	<0.01>
4248	SR 4/West Sand Creek Rd (S)	0.27	A	0.30	A	0.30	A	--	0.49	A	0.48	A	0.48	A	--
5510	Vasco Rd (relocated)/Camino Diablo (S)	1.11	F	1.13	F	1.11	F	<0.02>	1.35	F	1.35	F	1.38	F	0.03
5511	Walnut Blvd/Vasco Rd-SR 4 Bypass (S)	0.93	E	0.93	E	0.97	E	0.04	0.96	E	1.00	E	0.94	E	<0.06>
5518	SR 4 Bypass/Sand Creek Rd (S)	1.22	F	1.24	F	1.25	F	0.01	1.06	F	1.15	F	1.13	F	<0.02>

TABLE 2
LEVEL OF SERVICE SUMMARY
COWELL RANCH MITIGATED ALTERNATIVE

		AM Peak Hour							PM Peak Hour						
Node No.	Intersection	No Project		Full Buildout		Mitigated Alternative ⁽¹⁾			No Project		Full Buildout		Mitigated Alternative		
		V/C ⁽²⁾	LOS ⁽³⁾	V/C	LOS	V/C	LOS	V/C Diff. ⁽⁴⁾	V/C	LOS	V/C	LOS	V/C	LOS	V/C Diff.
5522	SR 4 Bypass/Balfour Rd (S)	1.46	F	1.60	F	1.58	F	<0.02>	1.37	F	1.52	F	1.53	F	0.01
5527	SR 4 Bypass/Marsh Creek Rd (S)	0.95	E	0.98	E	0.94	E	<0.04>	1.13	F	1.06	F	1.04	F	<0.02>
5686	Hillcrest Extension/Sand Creek Rd	0.05	A	0.06	A	0.06	A	--	0.08	A	0.10	A	0.10	A	--
9024	Cowell Pkwy/D St	--	--	0.27	A	0.24	A	<0.03>	--	--	0.51	A	0.47	A	<0.04>
9028	A St/Cowell Pkwy	--	--	0.18	A	0.18	A	--	--	--	0.29	A	0.28	A	<0.01>
9029	C St/Cowell Pkwy	--	--	0.09	A	0.08	A	<0.01>	--	--	0.14	A	0.13	A	<0.01>
9031	B St/Cowell Pkwy	--	--	0.13	A	0.11	A	<0.02>	--	--	0.17	A	0.15	A	<0.02>
9035	B St/Camino Diablo	--	--	0.19	A	0.16	A	<0.03>	--	--	0.15	A	0.12	A	<0.03>
9045	D St/Camino Diablo	--	--	0.33	A	0.25	A	<0.08>	--	--	0.27	A	0.23	A	<0.04>
9101	Marsh Creek/Central Pkwy	--	--	0.59	A	0.54	A	<0.05>	--	--	0.86	D	0.80	C	<0.06>
9102	I St/Central Pkwy	--	--	0.11	A	0.09	A	<0.02>	--	--	0.19	A	0.17	A	<0.02>
9103	Central Pkwy/L St	--	--	0.40	A	0.38	A	<0.02>	--	--	0.74	C	0.72	C	<0.02>
9104	H St/Central Pkwy	--	--	0.25	A	0.24	A	<0.01>	--	--	0.48	A	0.45	A	<0.03>
9105	Central Pkwy/K St	--	--	0.18	A	0.16	A	<0.02>	--	--	0.33	A	0.31	A	<0.02>
9111	Central Pkwy/J St	--	--	0.35	A	0.26	A	<0.09>	--	--	0.43	A	0.33	A	<0.10>
9144	N St/J St	--	--	0.26	A	0.18	A	<0.08>	--	--	0.36	A	0.25	A	<0.11>
9150	M St/L St	--	--	0.12	A	0.12	A	--	--	--	0.20	A	0.19	A	<0.01>
9158	J St/O St	--	--	0.09	A	0.09	A	--	--	--	0.13	A	0.13	A	--
9160	P St/J St	--	--	0.08	A	0.07	A	<0.01>	--	--	0.11	A	0.10	A	<0.01>
9406	Walnut Blvd/Cowell Pkwy	--	--	0.30	A	0.23	A	<0.07>	--	--	0.47	A	0.47	A	--
Secondary Locations															
3309	Lone Tree Way/SR 4 WB Ramps (S)	0.86	D	0.89	D	0.89	D	--	0.82	D	0.84	D	0.82	D	<0.02>
3314	Lone Tree Way/SR 4 EB Ramps (S)	0.69	B	0.70	B	0.70	B	--	1.00	E	1.03	F	1.01	F	<0.02>
3326	Hillcrest Ave/SR 4 WB Ramps (S)	0.67	B	0.66	B	0.64	B	<0.02>	0.77	C	0.78	C	0.78	C	--
3327	Hillcrest Ave/SR 4 EB Ramps (S)	0.78	C	0.79	C	0.77	C	<0.02>	0.97	E	0.98	E	0.98	E	--
3335	Deer Valley Rd/Hillcrest Ave (S)	0.66	B	0.65	B	0.65	B	--	0.78	C	0.78	C	0.78	C	--
4188	O'Hara Ave/Lone Tree Way	0.89	D	0.92	E	0.91	E	<0.01>	0.95	E	0.99	E	0.98	E	<0.01>
4219	Empire Ave/Lone Tree Way	0.77	C	0.74	C	0.73	C	<0.01>	0.59	A	0.63	B	0.63	B	--
5505	SR 4 Bypass NB Ramp/Laurel Rd	0.61	B	0.64	B	0.65	B	0.01	0.63	B	0.61	B	0.65	B	0.04
5506	SR 4 Bypass SB Ramp/Laurel Rd (S)	0.56	A	0.56	A	0.55	A	<0.01>	0.70	B	0.68	B	0.69	B	0.01
5513	SR 4 Bypass SB Ramp/Lone Tree Way (S)	0.45	A	0.41	A	0.42	A	0.01	0.68	B	0.70	B	0.69	B	<0.01>

TABLE 2
LEVEL OF SERVICE SUMMARY
COWELL RANCH MITIGATED ALTERNATIVE

		AM Peak Hour							PM Peak Hour						
<u>Node No.</u>	<u>Intersection</u>	<u>No Project</u>		<u>Full Buildout</u>		<u>Mitigated Alternative</u> ⁽¹⁾			<u>No Project</u>		<u>Full Buildout</u>		<u>Mitigated Alternative</u>		
		<u>V/C</u> ⁽²⁾	<u>LOS</u> ⁽³⁾	<u>V/C</u>	<u>LOS</u>	<u>V/C</u>	<u>LOS</u>	<u>V/C Diff.</u> ⁽⁴⁾	<u>V/C</u>	<u>LOS</u>	<u>V/C</u>	<u>LOS</u>	<u>V/C</u>	<u>LOS</u>	<u>V/C Diff.</u>
5514	SR 4 Bypass NB Ramp/Lone Tree Way (S)	0.57	A	0.47	A	0.49	A	0.02	0.60	A	0.62	B	0.62	B	—
3539	Byron Highway/Camino Diablo	1.05	F	1.09	F	1.08	F	<0.01>	0.99	E	0.99	E	0.99	E	—
4189	Fairview Ave/Lone Tree Way	0.73	C	0.70	B	0.70	B	—	0.88	D	0.90	D	0.77	C	<0.13>

Notes:

- (1) 730 dwelling unit reduction in Cowell Ranch Development Plan.
- (2) Volume/capacity.
- (3) Level of service.
- (4) "Mitigated Alternative" V/C minus "Full Buildout" V/C.

TABLE 3
NET CHANGE IN INTERSECTION V/C*
(NUMBER OF INTERSECTIONS)

			V/C Decrease				
	V/C Increase	No Change	<0.01>	<0.02>	<0.03>	<0.04>	Greater Than <0.04>
AM Peak Hour	11	18	13	10	4	1	6
PM Peak Hour	5	20	15	10	5	2	6

* Mitigated Alternative V/C ratio minus Full Buildout V/C ratio

With respect to level of service, in the AM peak hour, none of the intersections are projected to have different levels of service under the Mitigated Alternative than was found under the proposed project. In the PM peak hour, four such locations were found. At two of those intersections, the improvement was from LOS F to LOS E, and in both cases the LOS E finding was based on a V/C ratio of 1.00 (the threshold between LOS E and LOS F). The other two locations were found to improve from LOS D to LOS C; neither of those intersections was found to have a significant impact in the DEIR.

INTERSECTION MITIGATION REQUIREMENTS

The results of the analysis have also been reviewed to determine whether consideration of the Mitigated Alternative in place of the current proposed land use plan would eliminate the need to implement recommended mitigation measures at any of the study intersections. In short, the list of intersections requiring mitigation would be unchanged under the Mitigated Alternative. That is, all of the same intersections would require the same mitigation measures as proposed in the Cowell Ranch DEIR.

Table 4 summarizes the effect of implementing the recommended mitigation measures at the significantly-impacted intersections under the Mitigated Alternative.

**INTERSECTION MITIGATION LEVEL OF SERVICE SUMMARY
MITIGATED ALTERNATIVE - YEAR 2026**

Node No.	North-South Street	East-West Street	AM Peak Hour				PM Peak Hour			
			Before Mitigation		After Mitigation		Before Mitigation		After Mitigation	
			V/C ⁽¹⁾	LOS ⁽²⁾	V/C	LOS	V/C	LOS	V/C	LOS
3026	Concord Avenue <i>PO Mitigation ⁽³⁾</i>	Balfour Rd <i>Add a second NB right-turn lane</i>	0.65	B	0.65	B	1.00	E	0.81	D
3343	Deer Valley Road <i>PFS Mitigation ⁽⁴⁾</i>	Lone Tree Way <i>Add a second SB left-turn lane</i>	0.80	C	0.80	C	1.03	F	0.89	D
3314	Lone Tree Way <i>PFS Mitigation</i>	State Route 4 EB Ramps <i>Add a second EB right-turn lane</i>	0.70	B	0.58	A	1.01	F	0.75	C
3327	Hillcrest Avenue <i>PFS Mitigation</i>	State Route 4 EB Ramps <i>Add a third NB through lane</i>	0.77	C	0.62	B	0.98	E	0.84	D
3354	Lone Tree Way <i>PFS Mitigation</i>	James Donlon Boulevard <i>Add a third SB through lane</i>	0.76	C	0.70	B	1.00	E	0.85	D
3503	Walnut Boulevard <i>PO Mitigation</i>	Balfour Road <i>Convert the shared EB through/right-turn lane to an exclusive through lane</i> <i>Add an exclusive right-turn lane</i>	0.71	C	0.60	A	0.92	E	0.81	D
3512	Walnut Boulevard <i>PO Mitigation</i>	Marsh Creek Road <i>Convert the shared NB through/right-turn lane to a second exclusive through lane</i> <i>Add a NB exclusive right-turn lane</i> <i>Add a second WB left-turn lane</i>	1.01	F	0.84	D	0.91	E	0.76	C
3541	State Route 4 <i>PO Mitigation</i>	Marsh Creek Road <i>Add a second NB through lane</i> <i>Add a second SB through lane</i>	1.04	F	0.82	D	0.99	E	0.76	C
4188	O'Hara Avenue <i>PFS Mitigation</i>	Lone Tree Way <i>Add a second EB left-turn lane</i>	0.92	E	0.80	C	0.98	E	0.70	B
4213	Hillcrest Avenue <i>PFS Mitigation</i>	Lone Tree Way <i>Convert WB shared through/right-turn lane to an exclusive right-turn lane</i>	0.79	C	0.69	B	0.93	E	0.71	C

TABLE 4

**INTERSECTION MITIGATION LEVEL OF SERVICE SUMMARY
MITIGATED ALTERNATIVE - YEAR 2026**

Node No.	North-South Street	East-West Street	AM Peak Hour				PM Peak Hour			
			Before Mitigation		After Mitigation		Before Mitigation		After Mitigation	
			<u>V/C</u> ⁽¹⁾	<u>LOS</u> ⁽²⁾	<u>V/C</u>	<u>LOS</u>	<u>V/C</u>	<u>LOS</u>	<u>V/C</u>	<u>LOS</u>
		Convert WB exclusive left-turn lane to a shared through/left-turn lane Add a second EB left-turn lane								
5510	Vasco Road PFS Mitigation	Camino Diablo Convert NB through/right-turn lane to an exclusive NB through lane Add a NB exclusive right-turn lane Convert WB right-turn lane to a shared through/right-turn lane Convert WB through/left-turn lane to an exclusive left-turn lane	1.11	F	0.73	C	1.38	F	0.87	D
5511	Walnut Boulevard PO Mitigation	Vasco Road/State Route 4 Bypass Add a second EB through lane Add a second WB through lane	0.97	E	0.65	B	0.94	E	0.69	B
5518	State Route 4 Bypass PFS Mitigation	Sand Creek Road Add a second NB through lane Add a second SB through lane	1.25	F	0.83	D	1.13	F	0.83	D
5522	State Route 4 Bypass PFS Mitigation Option 1)	Balfour Road NB Add second and third exclusive NB through lane WB Add a third WB through lane Convert WB right-turn lane to an unsignalized free right-turn lane SB Add a third SB exclusive through lane Add a second SB right-turn lane EB Add a third EB left-turn lane	1.58	F	0.71	C	1.53	F	0.89	D
5527	Option 2) State Route 4 Bypass PFS Mitigation	Convert intersection to an interchange Marsh Creek Road Add a second NB through lane Add a second SB through lane Add a second SB left-turn lane	0.94	E	0.65	B	1.04	F	0.68	B

INTERSECTION MITIGATION LEVEL OF SERVICE SUMMARY **MITIGATED ALTERNATIVE - YEAR 2026**

<u>Node No.</u>	<u>North-South Street</u>	<u>East-West Street</u>	<u>AM Peak Hour</u>				<u>PM Peak Hour</u>			
			<u>Before Mitigation</u>		<u>After Mitigation</u>		<u>Before Mitigation</u>		<u>After Mitigation</u>	
			<u>V/C</u> ⁽¹⁾	<u>LOS</u> ⁽²⁾	<u>V/C</u>	<u>LOS</u>	<u>V/C</u>	<u>LOS</u>	<u>V/C</u>	<u>LOS</u>
3539	Byron Highway	Camino Diablo	1.08	F	--		0.99	E	--	
	<i>PO Mitigation</i>	<i>Add a NB left-turn lane</i>								
		<i>Add a SB right-turn lane</i>								

Notes:

- (1) Volume capacity
- (2) Level of Service
- (3) PO Mitigation: Project-only mitigation responsibility
- (4) PFS Mitigation: Project fair share responsibility

CONCLUSION

This memorandum report has documented the results of an analysis of the traffic impacts associated with the Mitigated Alternative presented in the Cowell Ranch DEIR. The analysis has indicated that elimination of 730 dwelling units from the overall Cowell Ranch land use plan will have relatively little effect on traffic operations on the roadway system serving the project. The projected V/C ratio at approximately one-third of the study intersections would be unchanged under this alternative. Over three-quarters of the study locations have projected V/C ratios that are within 0.02 of the values documented in the DEIR. Such small changes in intersection operations are rarely discernible to the typical motorist. Finally, no change was projected in the magnitude or extent of the mitigation required at the study intersections – the same intersections would require the same improvements defined in the Cowell Ranch DEIR.

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